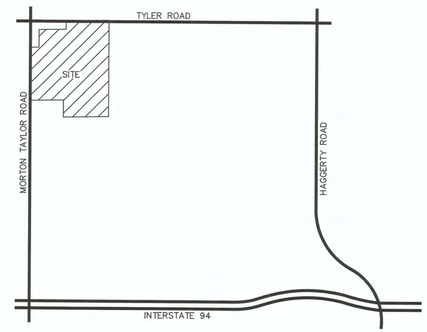
HAMPTON MANOR
of
VAN BUREN TOWNSHIP

SENIOR ASSISTED LIVING COMMUNITY

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

ENGINEER:
LEHNER ASSOCIATES, INC.
WILLIAM J. THOMPSON, PE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MICHIGAN 48038
(586) 412-7050 EXT. 106
bill@la-eng.com

DEVELOPER:
VAN BUREN INVESTORS
LAND HOLDINGS, LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com



LOCATION MAP
SCALE: 4"=1 MILE

DESCRIPTIONS ARE PREPARED FROM EXISTING VAN BUREN TOWNSHIP TAX RECORDS. ALL PARCELS SHALL BE COMBINED AFTER PURCHASE OF PROPERTY IS COMPLETED.

PARCEL 1: PARCEL #83-054-99-0012-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 333 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE NORTH 333 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 294.87 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 548 FEET; THENCE NORTH 219.87 FEET TO THE POINT OF BEGINNING. 4.18 ACRES.

PARCEL 2: PARCEL #83-054-99-0013-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING NORTH 89 DEGREES 00 MINUTES EAST 398 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 150 FEET; THENCE NORTH 258 FEET TO THE POINT OF BEGINNING. 0.89 ACRES.

PARCEL 3: PARCEL #83-054-99-0014-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 60 FEET AND NORTH 89 DEGREES EAST 60 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE SOUTH 123 FEET; THENCE NORTH 89 DEGREES EAST 188 FEET; THENCE NORTH 123 FEET; THENCE SOUTH 89 DEGREES WEST 188 FEET TO THE POINT OF BEGINNING. 0.53 ACRES.

PARCEL 4: PARCEL #83-054-99-0015-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 183 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE SOUTH 150 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 248 FEET; THENCE NORTH 150 FEET TO THE POINT OF BEGINNING EXCEPT THE WEST 60 FEET THEREOF. 0.65 ACRES.

PARCEL 5: PARCEL #83-054-99-0016-002
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 232 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 176 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 176 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.48 ACRES.

PARCEL 6: PARCEL #83-054-99-0016-003
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 408 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 140 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 140 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.38 ACRES.

EXISTING UTILITY COMPANIES:
DTE ENERGY (ELECTRIC)
EVENT #05495158
PLANNING AND DESIGN-SOUTHWEST-WESTERN WAYNE
8001 HAGGERTY ROAD
BELLEVILLE, MI 48111
PH. 734.397.4321

DTE ENERGY (GAS)
CHRISTOPHER BURKHART
8001 HAGGERTY ROAD
BELLEVILLE, MI 48111
PH. 734.544.7809

COMCAST COMPANY
JAMES STITZEL
6095 WALL STREET
STERLING HEIGHTS, MI 48049
PH. 586.883.7263

AT & T
DIANE ROEHM
100 SOUTH MAIN
MOUNT CLEMENS, MI 48043
PH. 586.433.6305

WAYNE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
SEPTIC TANK REMOVAL/ABANDONMENT
DAVID WILSON
33030 VAN BORN
WAYNE, MI 48184
PH. 734.727.7400

GENERAL NOTES:
1. HAMPTON MANOR OF VAN BUREN TOWNSHIP IS A PROPOSED SENIOR ASSISTED LIVING COMMUNITY THAT WILL INCLUDE A DINING AREA, SALON, ACTIVITY CENTER, FITNESS ROOM, TELEVISION ROOM, AND LANDSCAPED COURTYARDS WITHIN THE BUILDING AND WALKING AREAS AND LANDSCAPED GARDEN AREAS WITH BENCHES AND OPEN SPACES OUTSIDE THE BUILDING.
2. ALL ONSITE DEBRIS SHALL BE REMOVED WEEKLY OR AS NEEDED.
3. PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES AND SURFACE SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED. PARKING LOT STRIPING AND MARKINGS SHALL BE MAINTAINED IN A CLEARLY VISIBLE CONDITION.
4. ALL AREAS NOT BUILT OR PAVED UPON SHALL BE SODDED OR SEEDED AND IRRIGATED.
5. THERE SHALL BE NO OUTSIDE STORAGE.
6. THERE SHALL BE NO STORAGE, LOADING, DISPOSAL, OR TRANSFER OF ANY HAZARDOUS/TOXIC WASTE (GAS, OIL, TRANSMISSION FLUID, LUBRICANTS, SOLVENTS, ETC.).

FIRE DEPARTMENT NOTES:
1. THE PROPOSED FIRE DEPARTMENT CONNECTION IS LOCATED ON THE NORTH WALL NEAR THE EAST CORNER OF THE BUILDING.
2. THE FIRE DEPARTMENT CONNECTION SHALL BE A 4 INCH STORTZ FITTING WITH A 30 DEGREE DOWNTURN AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
3. FIRE HYDRANTS SHALL BE TWO 4 INCH STORTZ CONNECTIONS NOT THREADED.
4. THE BUILDING SHALL BE PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA13, STANDARD FOR THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS.
5. THE ARCHITECT AND FIRE DEPARTMENT SHALL COORDINATE FOR THE LOCATION OF A KNOX BOX ELOCK SYSTEM.
6. EMERGENCY RESPONDER RADIO COVERAGE SYSTEM IS REQUIRED UNLESS IT CAN BE PROVEN AFTER BUILDING IS CONSTRUCTED AND OCCUPIED THAT COVERAGE IS SUFFICIENT. THIS WILL BE VERIFIED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO FINAL CERTIFICATE OF OCCUPANCY.

SHEET INDEX

THE FOLLOWING STIPULATIONS ARE AN INTEGRAL PART OF THE CONTRACT

WHERE DATA RESPECTING EXISTING CONDITIONS IS PROVIDE OR MENTIONED IN THE CONTRACT, DOCUMENTS AND PLANS SUCH IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AND ARE NOT A GUARANTEE OF CONDITIONS.

THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE SUFFICIENCY OF SUCH DATA; AND SHALL HIMSELF MAKE ALL INVESTIGATIONS NECESSARY SO THAT HIS BOND SHALL BE BASED SOLELY UPON HIS KNOWLEDGE AND ESTIMATION OF CONDITIONS TO BE MET.

THE CONTRACTOR SHALL MAKE ALL INVESTIGATIONS NECESSARY TO INFORM HIMSELF THOROUGHLY REGARDING THE AVAILABILITY OF ALL FACILITIES WHICH WILL BE REQUIRED IN PERFORMANCE OF THE WORK, INCLUDING FACILITIES FOR THE DELIVERY OF MATERIALS AND EQUIPMENT.

NO PLEA OF IGNORANCE OF EXISTING CONDITIONS, OR OF FAILURE TO ANTICIPATE DEVELOPMENTS WHICH MAY OCCUR BECAUSE OF EXISTING CONDITIONS, OR OF IGNORANCE OF CONDITIONS OF DIFFICULTIES THAT MAY BE ENCOUNTERED IN THE PROSECUTION OF THE WORK DUE TO EXISTING CONDITIONS OR TO REQUIREMENTS OF THE CONTRACT DOCUMENTS, SHALL RELIEVE THE CONTRACTOR OF THE OBLIGATION TO FULFILL IN EVERY DETAIL ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS NOR SHALL THEY CONSTITUTE A BASIS FOR ANY CLAIMS WHATSOEVER FOR EXTRA COMPENSATION OR EXTENSION OF TIME.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

PLAN SUBMITTAL, REVIEWS AND PERMITS

AGENCY	DATE SENT	DATE RECEIVED	DATE SENT	DATE APPROVED	PERMIT #
VAN BUREN TOWNSHIP PLANNING AND ECONOMIC DEVELOPMENT	11-06-19	12-29-19	07-06-2020		
VAN BUREN TOWNSHIP FIRE DEPARTMENT	11-06-19				
VAN BUREN TOWNSHIP ENGINEERING-CONSULTING ENGINEERS	11-06-19		9-25-2020		
WAYNE COUNTY DEPT. OF PUBLIC SERVICES (STORM WATER AND ROADS)	11-06-19	11-13-19 03-17-21	9-25-2020 04-06-2021		
WAYNE COUNTY DEPT. OF PUBLIC SERVICES ENGINEERING-SOIL EROSION	11-06-19			11-21-19	19-329
EGLE-WATER PERMIT					
DTE ENERGY (ELECTRIC)	10-23-19				
DTE ENERGY (GAS)	11-26-19	12-04-19 (EX. MAPS)			
AT & T	11-19-19	11-27-19 (EX. MAPS)			
CABLE COMPANY					
STATE LICENSING					

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

HAMPTON MANOR
OF VAN BUREN TOWNSHIP
COVER SHEET

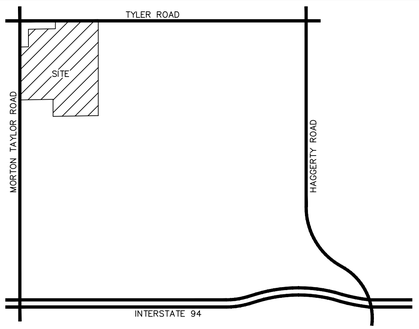
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: NO SCALE
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 01

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 01 Cover, 5/19/2021 8:51:13 AM, laura.ambros

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM



LOCATION MAP
SCALE: 4"=1 MILE

BENCHMARK #4
ARROW ON HYDRANT
ELEV.=683.33

BENCHMARK #5
ARROW ON HYDRANT
ELEV.=683.53

BENCHMARK #1
RAILROAD SPIKE
IN UTILITY POLE
ELEV.=682.28

BENCHMARK #2
RAILROAD SPIKE
IN UTILITY POLE
ELEV.=683.13

BENCHMARK #3
ARROW ON HYDRANT
ELEV.=683.74

N.W. COR. SEC. 14, T.3S., R.6E., VAN BUREN TWP., WAYNE COUNTY, MI

TYLER ROAD

MORTON TAYLOR ROAD

S89°00'00"W 248.00'
N89°00'00"E 188.00'
S00°00'00"E 183.00'
N00°00'00"E 123.00'
N89°00'00"E 60.00'
N00°00'00"E 369.89'
S89°00'00"W 232.00'
N00°00'00"E 119.23'
S89°00'00"W 316.00'
N89°00'00"E 300.00'
S00°00'00"E 672.10'

83-054-99-0014-701
0.53 ACRES
43311 TYLER ROAD

83-054-99-0013-000
0.89 ACRES
43201 TYLER ROAD

83-054-99-0015-701
0.65 ACRES
9475 MORTON TAYLOR ROAD

83-054-99-0012-000
4.18 ACRES
9511 MORTON TALOR ROAD

83-054-99-0016-002
0.48 ACRES
TYLER ROAD

83-054-99-0016-003
0.38 ACRES
TYLER ROAD

TOTAL SITE
7.11 ACRES GROSS
6.39 ACRES NET

ZONED R-1B
ZONED R-1C
ZONED C

EX. BUILDING 24' HIGH
EX. BUILDING 19.2' HIGH
EX. BARN 19.2' HIGH
EX. BUILDING 15' HIGH

DESCRIPTIONS ARE PREPARED FROM EXISTING VAN BUREN TOWNSHIP TAX RECORDS. ALL PARCELS SHALL BE COMBINED AFTER PURCHASE OF PROPERTY IS COMPLETED.

PARCEL 1: PARCEL #83-054-99-0012-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 333 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE NORTH 333 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 294.87 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 548 FEET; THENCE NORTH 219.87 FEET TO THE POINT OF BEGINNING. 4.18 ACRES.

PARCEL 2: PARCEL #83-054-99-0013-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING NORTH 89 DEGREES 00 MINUTES EAST 398 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 150 FEET; THENCE NORTH 258 FEET TO THE POINT OF BEGINNING. 0.89 ACRES.

PARCEL 3: PARCEL #83-054-99-0014-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 60 FEET AND NORTH 89 DEGREES EAST 60 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE SOUTH 123 FEET; THENCE NORTH 89 DEGREES EAST 188 FEET; THENCE NORTH 123 FEET; THENCE SOUTH 89 DEGREES WEST 188 FEET TO THE POINT OF BEGINNING. 0.53 ACRES.

PARCEL 4: PARCEL #83-054-99-0015-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 183 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE SOUTH 150 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 248 FEET; THENCE NORTH 150 FEET TO THE POINT OF BEGINNING EXCEPT THE WEST 60 FEET THEREOF. 0.65 ACRES.

PARCEL 5: PARCEL #83-054-99-0016-002
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 232 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 176 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 176 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.48 ACRES.

PARCEL 6: PARCEL #83-054-99-0016-003
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 408 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 140 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 140 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.38 ACRES.

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

EXISTING LEGEND
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG — UG — UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP BOUNDARY AND TOPOGRAPHY

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No.: 02

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 02-Topo, 5/19/2021 9:59:28 AM, laura.ambros

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

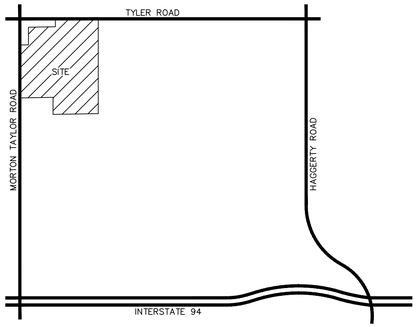
SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

EXISTING LEGEND

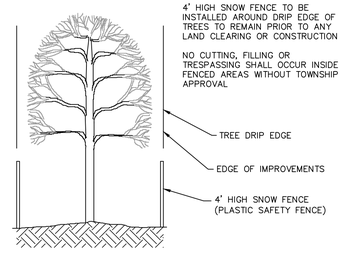
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG UG UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GV GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

LEGEND

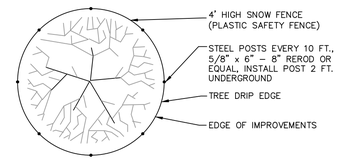
- TREE PROTECTION FENCE
- X TREE TO BE REMOVED



LOCATION MAP
SCALE: 4"=1 MILE



SECTION VIEW



PLAN VIEW

TREE PROTECTION DETAIL
N.T.S.

DEFINITIONS OF RATINGS:

Good: The tree appears to be in a healthy and satisfactory condition with an overall sound stem structure and with a full and balanced crown; the growth habit appears normal; there is no indication of pests or diseases present; the life expectancy is judged to be greater than twenty five (25) years.

Fair: The tree appears to be in a healthy and satisfactory condition with a minimum of structural problems and with minor crown imbalance or thin crown; the growth habit appears normal; there is no indication of pests or diseases present; and the life expectancy is judged to be greater than twenty (20) years.

Poor: The tree appears to be in an unhealthy condition with structural problems and with major crown imbalance, dead or dying limbs, or growth only in the top quarter of the tree; the growth habit is misshapen and askew; there is evidence of pests or diseases present; and the life expectancy is judged to be less than en (10) years.

Very Poor: The tree appears to be in an unhealthy condition with major structural problems and with major crown imbalance and several dead limbs and/or peeling bark; the growth habit is severely misshapen and askew; there is evidence of pest or diseases present; and the life expectancy is judged to be less than five (5) years.

Dead: The tree has no live branches, is topped, or fallen.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP TREE PRESERVATION PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 03

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 03-Tree, 5/19/2021 10:03:53 AM, laura.ambros

TREE LIST
LEGEND: G=GOOD, F=FAIR, P=POOR, D=DEAD

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION	CONDITION	REMOVE/SAVE	REGULATED/UNREGULATED
723	682.59	4609.42	5204.87	15" HONEY LOCUST	G	REMOVE	REGULATED
724	682.21	4649.08	5210.79	7" SUGAR MAPLE	G	REMOVE	REGULATED
804	681.42	4910.38	5437.58	10" RED MAPLE	G	REMOVE	REGULATED
805	681.70	4900.68	5430.07	10" HONEY LOCUST	G	REMOVE	REGULATED
806	681.65	4890.56	5424.25	10" HONEY LOCUST	G	REMOVE	REGULATED
807	681.65	4890.56	5430.25	7" RED MAPLE	G	REMOVE	REGULATED
808	681.34	4894.55	5405.99	10" HONEY LOCUST	G	REMOVE	REGULATED
809	681.29	4879.71	5399.61	15" HONEY LOCUST	G	REMOVE	REGULATED
810	680.57	4870.17	5411.90	10" HONEY LOCUST	G	REMOVE	REGULATED
811	681.30	4875.53	5411.84	8" HONEY LOCUST	G	REMOVE	REGULATED
812	681.44	4878.90	5424.22	3-6" HONEY LOCUST	G	REMOVE	REGULATED
813	681.02	4876.72	5429.56	5" HONEY LOCUST	G	REMOVE	REGULATED
814	681.57	4862.83	5421.46	10" HONEY LOCUST	G	REMOVE	REGULATED
815	681.74	4847.69	5427.94	10" HONEY LOCUST	G	REMOVE	REGULATED
816	681.69	4836.03	5427.79	10" HONEY LOCUST	G	REMOVE	REGULATED
817	681.76	4833.09	5423.40	10" HONEY LOCUST	G	REMOVE	REGULATED
818	681.59	4836.01	5416.41	12" HONEY LOCUST	G	REMOVE	REGULATED
819	681.91	4834.45	5385.04	3-5&6" MULBERRY	F	REMOVE	UNREGULATED
820	681.87	4840.09	5364.47	3-6" MULBERRY	F	REMOVE	UNREGULATED
821	681.53	4830.17	5351.82	7" APPLE	P	REMOVE	UNREGULATED
823	681.57	4839.67	5322.24	7" RED OAK	G	REMOVE	REGULATED
824	681.57	4842.67	5322.24	2-5" BASSWOOD	F	REMOVE	REGULATED
827	681.78	4914.88	5357.82	5" WHITE ASH	F	REMOVE	UNREGULATED
833	683.42	4928.05	5388.36	12&6" WHITE ASH	F	REMOVE	UNREGULATED
834	682.71	4928.29	5383.07	7" WHITE ASH	F	REMOVE	UNREGULATED
835	681.64	4817.22	5311.64	7" WHITE ASH	F	REMOVE	UNREGULATED
836	682.05	4785.11	5314.92	7" WHITE ASH	F	REMOVE	UNREGULATED
837	682.48	4768.13	5308.53	12" RED MAPLE	G	REMOVE	REGULATED
838	682.29	4757.83	5348.28	10" BOX ELDER	F	REMOVE	UNREGULATED
842	681.52	4764.92	5411.40	6&10" APPLE	D	REMOVE	UNREGULATED
844	682.09	4667.30	5290.75	12" HONEY LOCUST	G	REMOVE	REGULATED
845	681.80	4666.33	5334.36	6-6" APPLE	F	REMOVE	REGULATED
846	681.81	4666.33	5334.35	6-6" APPLE	F	REMOVE	REGULATED
848	681.85	4669.93	5358.54	3-6&8" RED MAPLE	G	REMOVE	REGULATED
849	681.85	4659.93	5368.54	10" RED MAPLE	G	REMOVE	REGULATED
850	681.90	4642.42	5364.58	7" RED MAPLE	G	REMOVE	REGULATED
851	681.90	4642.42	5369.58	8" RED MAPLE	G	REMOVE	REGULATED
852	682.14	4606.34	5362.92	9" RED MAPLE	G	REMOVE	REGULATED
853	682.04	4600.26	5363.50	7" RED MAPLE	F	REMOVE	REGULATED
854	682.18	4594.30	5416.37	5-6" CRABAPPLE	F	REMOVE	REGULATED
855	682.51	4575.34	5414.26	7" SUGAR MAPLE	F	REMOVE	REGULATED
856	682.43	4545.42	5401.86	5" WHITE ASH	D	REMOVE	UNREGULATED
857	682.53	4535.09	5408.26	5" WHITE ASH	D	REMOVE	UNREGULATED
858	682.53	4529.09	5408.26	3-8&3-5" RED MAPLE	F	REMOVE	REGULATED
860	681.93	4557.95	5360.91	11" RED MAPLE	G	REMOVE	REGULATED
861	681.93	4553.03	5360.05	11" RED MAPLE	G	REMOVE	REGULATED
862	681.93	4545.15	5358.66	11" RED MAPLE	G	REMOVE	REGULATED
863	681.93	4540.22	5357.79	11" RED MAPLE	G	REMOVE	REGULATED
864	681.93	4535.30	5356.92	11" RED MAPLE	G	REMOVE	REGULATED
865	681.93	4530.37	5356.05	11" RED MAPLE	G	REMOVE	REGULATED
867	682.29	4543.81	5313.63	6" BOX ELDER	F	REMOVE	UNREGULATED
868	682.22	4541.65	5318.44	7" BOX ELDER	P	REMOVE	UNREGULATED
869	682.21	4541.12	5337.22	6" WHITE ASH	D	REMOVE	UNREGULATED
870	682.21	4535.13	5336.91	6" BOX ELDER	P	REMOVE	UNREGULATED
871	681.60	4507.88	5336.77	8" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
872	682.30	4511.33	5322.77	5" AMERICAN ELM	D	REMOVE	UNREGULATED
873	682.15	4498.02	5327.65	5" AMERICAN ELM	D	REMOVE	UNREGULATED
874	682.02	4481.45	5326.98	6" WHITE ASH	D	REMOVE	UNREGULATED
875	682.83	4462.18	5307.14	2-6" AMERICAN ELM	D	REMOVE	UNREGULATED
876	683.09	4459.68	5306.33	2-5" WHITE ASH	D	REMOVE	UNREGULATED
877	682.69	4492.07	5309.29	5&9" RED MAPLE	G	REMOVE	REGULATED
878	682.34	4499.55	5309.27	8" RED MAPLE	G	REMOVE	REGULATED
879	682.38	4529.17	5304.66	2-8" RED MAPLE	G	REMOVE	REGULATED
880	682.38	4514.42	5293.60	6" HOP-HORNBEAM	F	REMOVE	REGULATED
881	683.02	4524.22	5274.35	4&8" BOX ELDER	G	REMOVE	UNREGULATED

TREE LIST
LEGEND: G=GOOD, F=FAIR, P=POOR, D=DEAD

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION	CONDITION	REMOVE/SAVE	REGULATED/UNREGULATED
929	681.63	4900.68	5489.96	7" BOX ELDER	F	REMOVE	UNREGULATED
930	681.61	4896.49	5490.06	2-7" BOX ELDER	F	REMOVE	UNREGULATED
931	681.34	4894.03	5539.03	18" HONEY LOCUST	G	SAVE	REGULATED
932	681.53	4867.76	5533.80	7" SUGAR MAPLE	G	SAVE	REGULATED
937	681.39	4851.44	5531.62	2-5" APPLE	F	SAVE	REGULATED
938	681.04	4848.63	5473.24	12" BOX ELDER	F	REMOVE	UNREGULATED
948	681.54	4782.88	5497.33	5&6" BOX ELDER	F	REMOVE	UNREGULATED
949	681.76	4759.58	5489.51	5" APPLE	P	REMOVE	REGULATED
950	681.45	4700.03	5484.60	14" BOX ELDER	F	REMOVE	UNREGULATED
951	681.34	4701.98	5510.92	2-12&8" BOX ELDER	F	REMOVE	UNREGULATED
961	681.50	4568.92	5513.65	7" APPLE	P	REMOVE	UNREGULATED
962	680.74	4577.51	5541.09	6" RED OAK	G	SAVE	REGULATED
966	680.55	4518.07	5548.45	2-5" WHITE ASH	F	SAVE	UNREGULATED/OFFSITE
970	681.06	4505.19	5526.07	5" HAWTHORN	G	REMOVE	REGULATED
971	681.76	4523.05	5513.97	6" HAWTHORN	G	REMOVE	REGULATED
972	682.07	4531.06	5490.56	6" SUGAR MAPLE	F	REMOVE	UNREGULATED
973	682.38	4503.52	5449.34	5&6" HONEY LOCUST	P	REMOVE	UNREGULATED
974	682.21	4474.50	5451.42	3-9" RED MAPLE	G	REMOVE	REGULATED
975	682.31	4461.71	5452.28	12" RED MAPLE	G	REMOVE	REGULATED
976	681.74	4425.14	5487.57	2-5" HAWTHORN	F	REMOVE	REGULATED
977	681.08	4433.99	5534.40	6&10" RED MAPLE	G	REMOVE	REGULATED
978	681.16	4470.06	5532.75	13" RED MAPLE	G	SAVE	REGULATED
979	681.16	4480.89	5530.84	6" RED MAPLE	F	SAVE	REGULATED
980	681.16	4456.06	5532.75	5&7" RED OAK	G	REMOVE	REGULATED
995	682.67	4374.35	5289.50	6" SILVER MAPLE	G	REMOVE	UNREGULATED
998	682.52	4480.56	5410.91	6" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
999	682.53	4471.01	5395.96	5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1000	682.92	4465.81	5392.42	7" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1003	683.13	4461.23	5405.03	7" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1004	682.97	4453.91	5400.44	5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1005	682.93	4451.23	5391.92	8" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1006	682.32	4444.06	5391.71	8" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1007	682.41	4446.39	5380.56	5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1010	689.08	4409.53	5373.86	12" EASTERN COTTONWOOD	F	REMOVE	UNREGULATED
1011	689.27	4395.84	5389.52	2-5" EASTERN COTTONWOOD	P	REMOVE	UNREGULATED
1012	689.83	4387.55	5379.53	2-6" RED MAPLE	G	REMOVE	REGULATED
1014	690.45	4383.25	5360.56	2-4&7" WILLOW	F	REMOVE	UNREGULATED
1016	690.93	4378.13	5371.10	10" BOX ELDER	F	REMOVE	UNREGULATED
1017	689.70	4366.36	5367.15	5" WILLOW	F	REMOVE	UNREGULATED
1018	686.86	4357.37	5358.03	2-5" WILLOW	F	REMOVE	UNREGULATED
1019	687.18	4361.04	5347.66	6" WILLOW	F	REMOVE	UNREGULATED
1020	687.47	4357.80	5344.49	8" WILLOW	F	REMOVE	UNREGULATED
1021	686.32	4355.60	5337.59	2-5" SILVER MAPLE	G	REMOVE	UNREGULATED
1022	685.53	4350.97	5336.59	5" WILLOW	F	REMOVE	UNREGULATED
1023	686.46	4355.53	5330.28	6" SILVER MAPLE	F	REMOVE	UNREGULATED
1024	686.13	4356.28	5323.74	6" SILVER MAPLE	F	REMOVE	UNREGULATED
1025	686.38	4351.63	5316.86	6" WILLOW	F	REMOVE	UNREGULATED
1026	689.60	4367.57	5317.31	6" WILLOW	F	REMOVE	UNREGULATED
1028	687.65	4370.18	5331.47	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1029	685.64	4356.78	5306.40	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1030	682.44	4352.76	5298.01	2-5" SILVER MAPLE	G	REMOVE	UNREGULATED
1031	682.43	4361.27	5295.33	12" SILVER MAPLE	F	REMOVE	UNREGULATED
1032	683.01	4377.38	5304.84	3-5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1033	682.57	4382.72	5313.66	10" WILLOW	G	REMOVE	UNREGULATED
1034	682.57	4382.72	5308.66	8" SILVER MAPLE	G	REMOVE	UNREGULATED
1035	682.51	4382.15	5329.86	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1036	681.39	4392.14	5329.63	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1037	682.59	4398.60	5332.19	5" SILVER MAPLE	F	REMOVE	UNREGULATED
1038	682.80	4397.22	5317.46	11" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1039	682.88	4408.12	5326.72	12" EASTERN COTTONWOOD	F	REMOVE	UNREGULATED
1040	682.85	4408.12	5345.90	9" SILVER MAPLE	G	REMOVE	UNREGULATED
1041	682.85	4408.12	5338.90	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1045	682.15	4335.01	5298.76	6" SILVER MAPLE	F	REMOVE	UNREGULATED
1046	682.35	4339.87	5315.32	5" SILVER MAPLE	F	REMOVE	UNREGULATED
1047	683.14	4341.05	5317.83	5" SILVER MAPLE	G	REMOVE	UNREGULATED
1048	682.43	4341.13	5326.07	5" SILVER MAPLE	G	REMOVE	UNREGULATED

TREE LIST
LEGEND: G=GOOD, F=FAIR, P=POOR, D=DEAD

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION	CONDITION	REMOVE/SAVE	REGULATED/UNREGULATED
1051	684.99	4348.97	5370.77	7" WILLOW	G	REMOVE	UNREGULATED
1052	686.94	4358.00	5380.15	2-5" WILLOW	G	REMOVE	UNREGULATED
1058	683.07	4363.03	5411.29	5" SILVER MAPLE	F	REMOVE	UNREGULATED
1060	687.16	4366.46	5389.83	6" WILLOW	F	REMOVE	UNREGULATED
1061	687.18	4362.23	5387.44	12" WILLOW	G	REMOVE	UNREGULATED
1063	682.44	4385.30	5403.01	6" BLUE SPRUCE	D	REMOVE	UNREGULATED
1064	682.51	4392.70	5403.39	6" BLUE SPRUCE	D	REMOVE	UNREGULATED
1065	682.52	4400.41	5407.91	6" HAWTHORN	D	REMOVE	UNREGULATED
1066	682.83	4403.68	5406.17	6" BLUE SPRUCE	D	REMOVE	UNREGULATED
1067	682.57	4413.82	5407.97	5" WHITE ASH	P	REMOVE	UNREGULATED
1068	682.66	4419.48	5405.65	5" BLACK CHERRY	P	REMOVE	REGULATED
1069	683.35	4421.29	5401.85	7" SILVER MAPLE	G	REMOVE	UNREGULATED
1073	682.16	4429.46	5474.47	5" RED MAPLE	P	REMOVE	REGULATED
1074	682.15	4409.67	5486.09	7" RED MAPLE	F	REMOVE	REGULATED
1075	681.97	4378.45	5509.57	8" PIN OAK	G	REMOVE	REGULATED
1076	681.83	4363.27	5509.41	3-6" SUGAR MAPLE	G	REMOVE	REGULATED
1077	681.99	4356.36	5493.13	5" SUGAR MAPLE	F	REMOVE	REGULATED
1078	681.52	4354.69	5480.88	7" RED MAPLE	G	REMOVE	REGULATED
1080	682.29	4393.97	5446.98	5&7" SUGAR MAPLE	G	REMOVE	REGULATED
1081	682.02	4370.33	5442.15	9" SUGAR MAPLE	G	REMOVE	REGULATED
1082	681.84	4398.91	5454.29	11" SUGAR MAPLE	G	REMOVE	REGULATED
1083	682.19	4399.37	5446.87	6" SUGAR MAPLE	G	REMOVE	REGULATED
1084	682.22	4418.22	5447.27	9" SUGAR MAPLE	F	REMOVE	REGULATED
1085	682.22	4416.67	5453.07	7&10" SILVER MAPLE	F	REMOVE	UNREGULATED
1086	682.55	4428.11	5452.34	16" SUGAR MAPLE	G	REMOVE	REGULATED
1089	683.49	4381.26	5233.64	9" SCOTCH PINE	P	REMOVE	UNREGULATED
1090	683.48	4417.71	5233.68	7" BLUE SPRUCE	P	REMOVE	UNREGULATED
1091	683.15	4420.42	5217.58	6" RED MAPLE	G	SAVE	UNREGULATED/OFFSITE
1092	683.04	4453.46	5231.47	10" RED PINE	P	REMOVE	UNREGULATED
1124	683.11	4441.45	5105.07	12" BLACK CHERRY	G	SAVE	UNREGULATED/OFFSITE
1184	682.45	4451.21	5221.35	13" RED PINE	F	SAVE	REGULATED
1185	682.40	4451.08	5213.46	10" RED PINE	F	SAVE	REGULATED
1186	682.52	4450.94	5206.18	10" RED PINE	F	SAVE	REGULATED
1187	682.53	4450.98	5201.78	11" RED PINE	F	SAVE	REGULATED
1188	682.66	4452.09	5195.11	7" RED PINE	F	SAVE	REGULATED
1189	682.75	4452.64	5189.88	15" RED PINE	F	SAVE	REGULATED
1190	682.79	4452.78	5184.07	8" RED PINE	F	SAVE	REGULATED
1191	682.74	4452.01	5177.38	10" RED PINE	F	SAVE	REGULATED
1192	682.77	4451.25	5172.27	9" RED PINE	F	SAVE	REGULATED
1193	682.75	4451.50	5167.99	9" RED PINE	F	SAVE	REGULATED
1194	682.83	4450.54	5162.40	9" RED PINE	F	SAVE	REGULATED
1195	682.82	4450.61	5158.69	13" RED PINE	F	SAVE	REGULATED
1196	682.90	4449.89	5154.21	9" RED PINE	F	SAVE	REGULATED
1197	682.94	4450.36	5151.11	13" RED PINE	F	SAVE	REGULATED
1198	683.06	4451.37	5146.15	9" RED PINE	F	SAVE	REGULATED
1199	683.06	4450.29	5141.72	10" RED PINE	F	SAVE	REGULATED
1200	683.08	4450.30	5137.52	12" RED PINE	F	SAVE	REGULATED
1201	682.86	4451.00	5128.40	12" RED PINE	F	SAVE	REGULATED
1202	682.85	4450.86	5123.95	12" RED PINE	F	SAVE	REGULATED
1203	682.68	4450.95	5097.04	12" RED PINE	F	SAVE	REGULATED
1204	682.59	4449.77	5091.61	12" RED PINE	F	SAVE	REGULATED
1205	682.58	4450.11	5088.20	9" RED PINE	F	SAVE	REGULATED
1206	682.46	4449.41	5084.37	9" RED PINE	F	SAVE	REGULATED
1207	682.38	4449.33	5076.49	10" RED PINE	F	SAVE	REGULATED
1208	682.43	4449.91	5071.70	9" RED PINE	F	SAVE	REGULATED
1209	682.34	4449.39	5066.23	11" RED PINE	F	SAVE	REGULATED
1210	682.35	4449.32	5061.80	12" RED PINE	F	SAVE	REGULATED
1211	682.31	4448.40	5058.25	12" RED PINE	F	SAVE	REGULATED
1212	682.26	4449.05	5052.96	8" RED PINE	F	SAVE	REGULATED
1213	682.23	4448.96	5048.95	9" RED PINE	F	SAVE	REGULATED
1214	681.97	4448.76	5043.54	13" RED PINE	F	SAVE	REGULATED

SEE LANDSCAPE PLAN LS-1 OF 4
FOR TREE REMOVAL/REPLACEMENT SUMMARY.

OFFSITE TREES SHALL NOT BE REMOVED.

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP TREE LIST

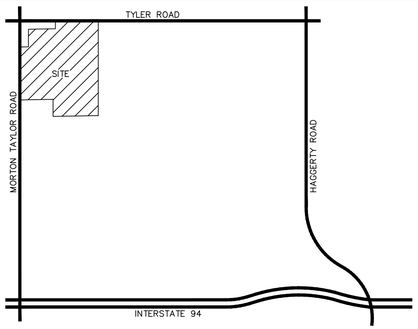
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: NO SCALE
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 04

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 04-Tree List, 5/19/2021 10:17:23 AM, laura.ambos

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM



LOCATION MAP
SCALE: 4"=1 MILE

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 — 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

DEMOLITION NOTES:
1. THE CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171 AND HAVE ALL EXISTING UTILITIES LOCATED PRIOR TO THE START ANY DEMOLITION/CONSTRUCTION.
2. CLEAN-OUT EXISTING STORM SEWER AND REMOVE DEBRIS AND SILT PRIOR TO THE START OF CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETED.
3. THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.
4. ALL ONSITE DEBRIS SHALL BE REMOVED WEEKLY OR AS NEEDED.
5. ALL EXISTING PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES AND SURFACES NOT SLATED FOR REMOVAL SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION.

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

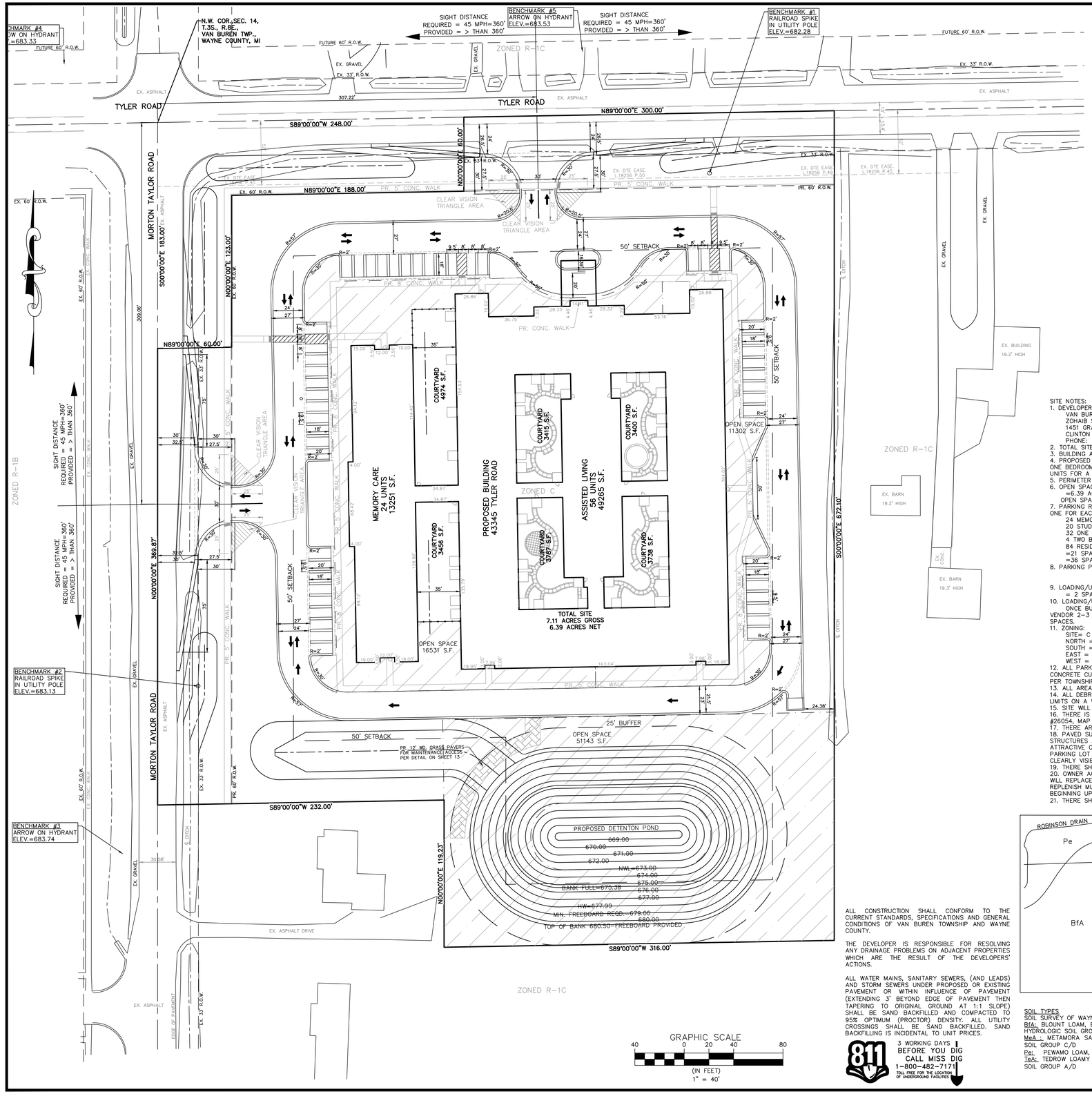
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP DEMOLITION PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 05

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 05-Demo, 5/19/2021 10:21:34 AM, laura.ambros



DESCRIPTIONS ARE PREPARED FROM EXISTING VAN BUREN TOWNSHIP TAX RECORDS. ALL PARCELS SHALL BE COMBINED AFTER PURCHASE OF PROPERTY IS COMPLETED.

PARCEL 1: PARCEL #83-054-99-0012-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 333 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE NORTH 333 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 294.87 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 548 FEET; THENCE NORTH 219.87 FEET TO THE POINT OF BEGINNING. 4.18 ACRES.

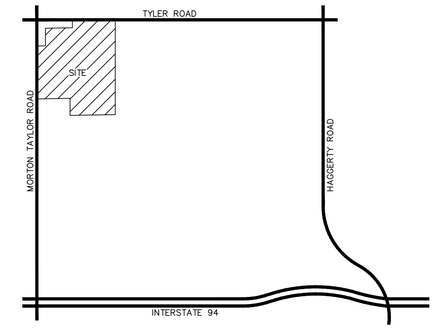
PARCEL 2: PARCEL #83-054-99-0013-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING NORTH 89 DEGREES 00 MINUTES EAST 398 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 150 FEET; THENCE NORTH 258 FEET TO THE POINT OF BEGINNING. 0.89 ACRES.

PARCEL 3: PARCEL #83-054-99-0014-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 60 FEET AND NORTH 89 DEGREES EAST 60 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE SOUTH 123 FEET; THENCE NORTH 89 DEGREES EAST 188 FEET; THENCE NORTH 123 FEET; THENCE SOUTH 89 DEGREES WEST 188 FEET TO THE POINT OF BEGINNING. 0.53 ACRES.

PARCEL 4: PARCEL #83-054-99-0015-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 183 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE SOUTH 150 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 248 FEET; THENCE NORTH 150 FEET TO THE POINT OF BEGINNING EXCEPT THE WEST 60 FEET THEREOF. 0.65 ACRES.

PARCEL 5: PARCEL #83-054-99-0016-002
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 232 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 176 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 176 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.48 ACRES.

PARCEL 6: PARCEL #83-054-99-0016-003
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 408 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 140 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 140 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.38 ACRES.

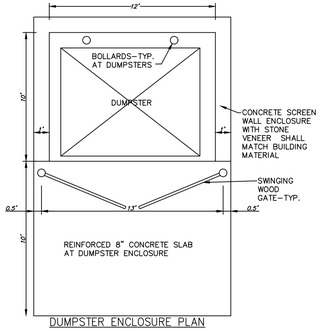


LOCATION MAP
SCALE: 4"=1 MILE

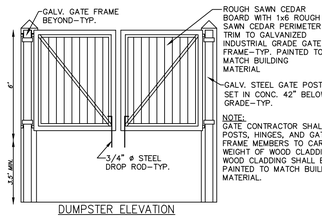
BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLI ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLI ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

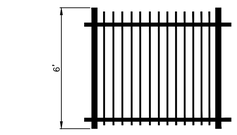
SITE NOTES:
1. DEVELOPER:
VAN BUREN INVESTORS LAND HOLDINGS, LLC
ZOHAIB SYED
1451 GRATIOT AVENUE
CLINTON TWP., MI 48036
PHONE: 989-708-1878
2. TOTAL SITE AREA = 6.39 ACRES.
3. BUILDING AND PAVEMENT LOT COVERAGE = 50%
4. PROPOSED SENIOR ASSISTED LIVING WITH 4 TWO BEDROOM, 32 ONE BEDROOM UNITS, 20 EFFICIENCY UNITS AND 24 MEMORY CARE UNITS FOR A TOTAL OF 80 UNITS.
5. PERIMETER SETBACK = 50 FT.
6. OPEN SPACE REQUIRED = 25% OF SITE AREA
=6.39 ACRES * 0.25 = 1.6 ACRES
OPEN SPACE PROVIDED = 2.40 ACRES
7. PARKING REQUIRED = 1 SPACE FOR EVERY 4 RESIDENTS PLUS ONE FOR EACH EMPLOYEE
24 MEMORY CARE = 24 RESIDENTS
20 STUDIO = 20 RESIDENTS
32 ONE BED = 32 RESIDENTS
4 TWO BED = 8 RESIDENTS
84 RESIDENTS/4
=21 SPACES + 15 EMPLOYEES
=36 SPACES REQUIRED
8. PARKING PROVIDED = 44 SPACES @ 9.5'x20'
6 HANDICAP SPACES
50 TOTAL SPACES PROVIDED
9. LOADING/UNLOADING REQUIRED
= 2 SPACES FOR OVER 50,000 S.F. OF FLOOR AREA
10. LOADING/UNLOADING PROVIDED = 1 10'x50' SPACE
ONCE BUILDING IS OPERATIONAL DELIVERIES WILL BE FROM ONE VENDOR 2-3 TIMES A WEEK WHICH DOES NOT NECESSITATE TWO SPACES.
11. ZONING:
SITE= C LOCAL BUSINESS
NORTH = R-1C SINGLE FAMILY RESIDENTIAL
SOUTH = R-1C SINGLE FAMILY RESIDENTIAL
EAST = R-1C SINGLE FAMILY RESIDENTIAL
WEST = R-1B SINGLE FAMILY RESIDENTIAL
12. ALL PARKING AND PAVING SURFACES SHALL BE ASPHALT WITH CONCRETE CURB AND GUTTER AND/OR THICKENED EDGE ASPHALT PER TOWNSHIP SPECIFICATIONS.
13. ALL AREAS NOT BUILT OR PAVED UPON SHALL BE IRRIGATED.
14. ALL DEBRIS SHALL BE REMOVED FROM WITHIN THE PROPERTY LIMITS ON A WEEKLY BASIS OR AS NEEDED.
15. SITE WILL NOT BE CONSTRUCTED IN PHASES.
16. THERE IS NO FLOOD PAIN ON THIS SITE PER FEMA COMMUNITY #26054, MAP #6163O352E, DATED 02-02-2012.
17. THERE ARE NO REGULATED WETLANDS ON THIS SITE.
18. PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES AND SURFACES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED. PARKING LOT STRIPING AND MARKINGS SHALL BE MAINTAINED IN A CLEARLY VISIBLE CONDITION.
19. THERE SHALL BE NO OUTDOOR STORAGE.
20. OWNER AGREES TO SEASONAL MAINTENANCE PROGRAM AND WILL REPLACE ALL DISEASED, DEAD OR DAMAGED PLANTS, REPLENISH MULCH, CONTROL WEEDS, FERTILIZE AND PRUNE BEGINNING UPON COMPLETION OF CONSTRUCTION OF LANDSCAPING.
21. THERE SHALL BE NO HAZARDOUS/TOXIC WASTE FROM THIS SITE.



DUMPSTER ENCLOSURE PLAN
(N.T.S.)



DUMPSTER ELEVATION
(N.T.S.)

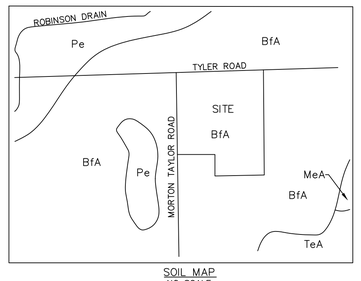


6' SIMULATED WROUGHT IRON FENCE
(N.T.S.)

ALUMINUM FENCE SIMULATING THE LOOK OF WROUGHT IRON. (MAINTENANCE FREE, POLYESTER POWDER COAT FINISH-NO PAINTING NECESSARY, DOESN'T RUST, CHIP, ETC.).

PROPOSED LEGEND
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG UG UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG UG UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GV GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER



SOIL MAP
NO SCALE

SOIL TYPES
SOIL SURVEY OF WAYNE COUNTY, MICHIGAN
BfA: BLOUNT LOAM, ERIE-HURON LAKE PLAIN, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP D
MeA : METAMORA SANDY LOAM, 0 TO 3 PERCENT SLOPES, HYDROLOGIC SOIL GROUP C/D
Pe: PEWAMO LOAM, HYDROLOGIC SOIL GROUP C/D
TeA: TEDROW LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP A/D

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

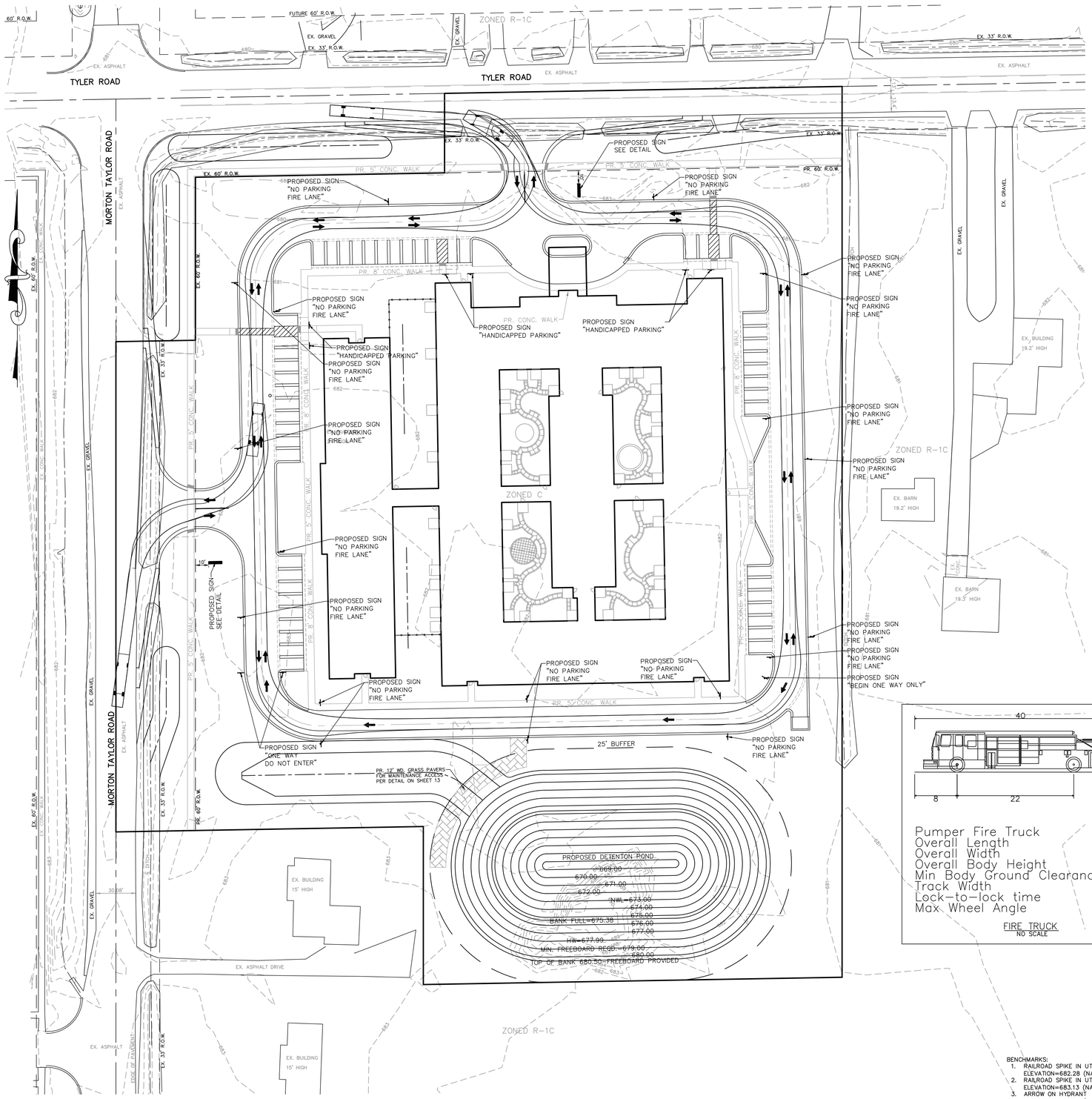
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP SITE PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 06

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 05-Site Plan, 5/19/2021 10:27:50 AM, laura.ambros

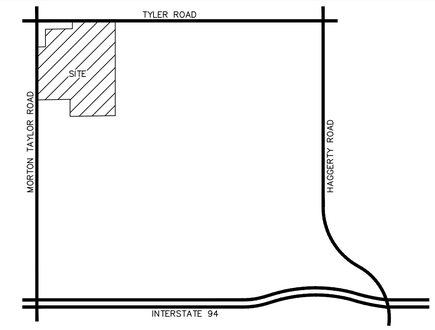


PROPOSED LEGEND

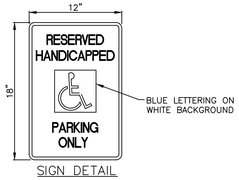
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG UG UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND

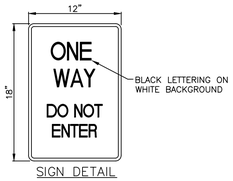
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG UG UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- W WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER



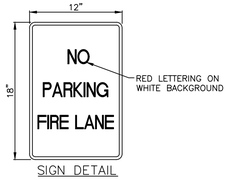
LOCATION MAP
SCALE: 4"=1 MILE



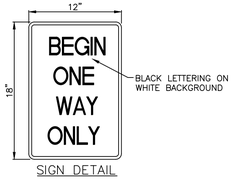
SIGN DETAIL



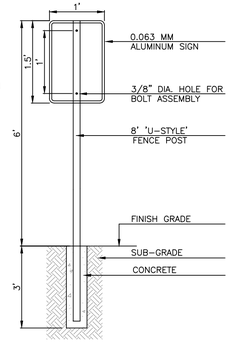
SIGN DETAIL



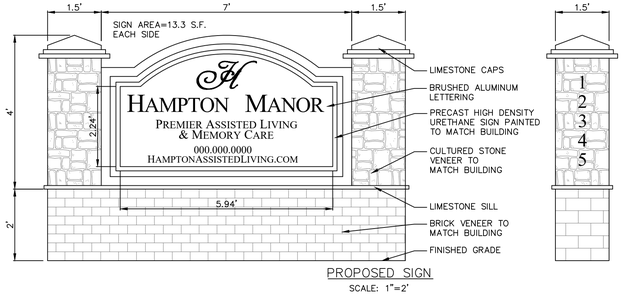
SIGN DETAIL



SIGN DETAIL



PARKING AREA SIGN DETAIL
(N.T.S.)



PROPOSED SIGN
SCALE: 1"=2'

FIRE TRUCK
NO SCALE

SEE ARCHITECTURAL PLANS FOR ENTRANCE SIGN DETAIL

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

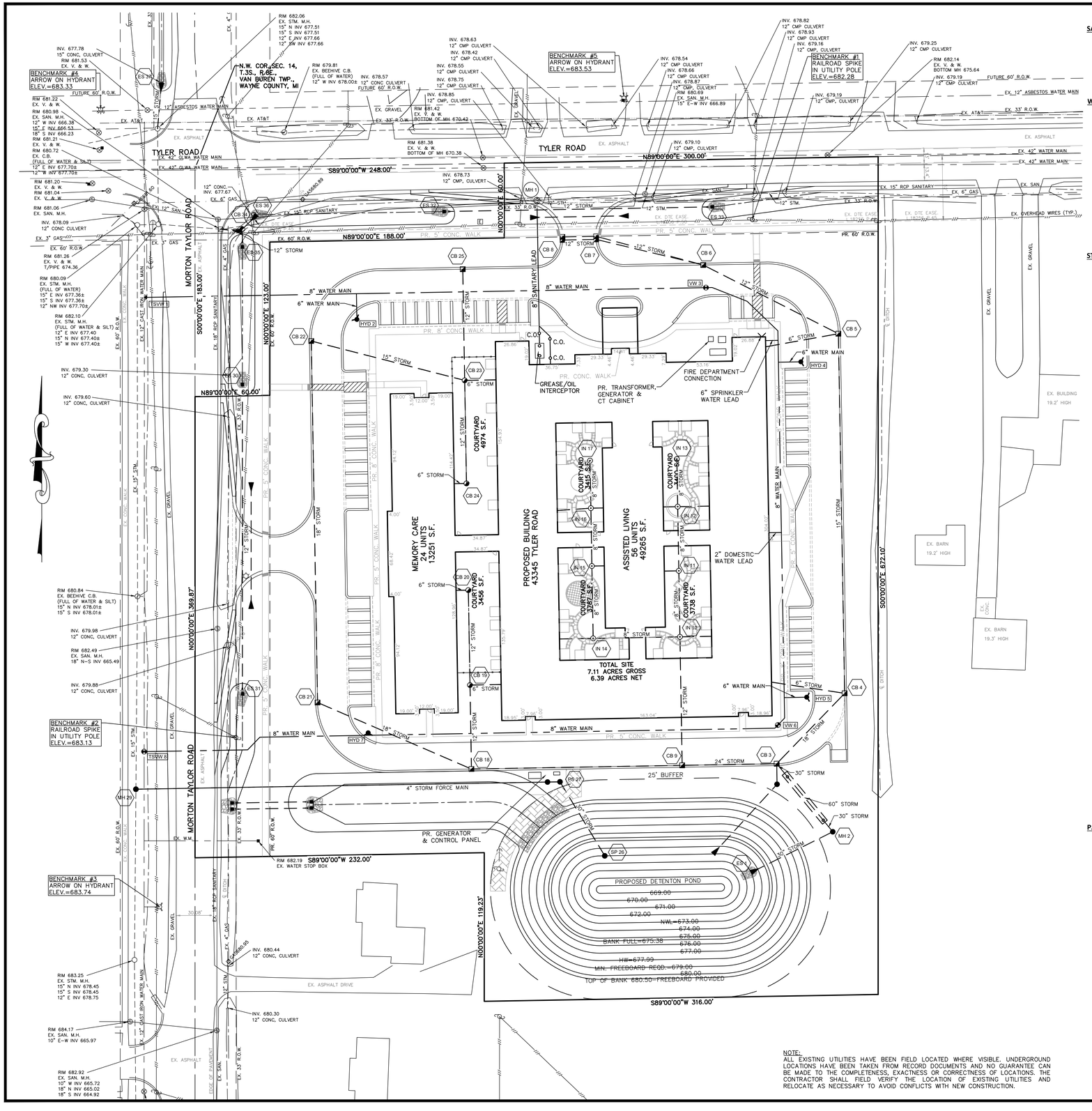
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP SIGNS AND AUTOTURN ANALYSIS

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 07

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 07-Signs-Truck Turn, 5/19/2021 10:30:49 AM, laura.ambros



SANITARY SEWER

QUANTITY	ITEM
143 l.f.	8" PVC Pipe, D3034, SDR 23.5
1 ea.	5' I Dia. Manhole Built Over Existing 15" Sewer with Interior Drop
1 ea.	KSI 2000 Gallon Grease/Oil Interceptor

WATER MAIN

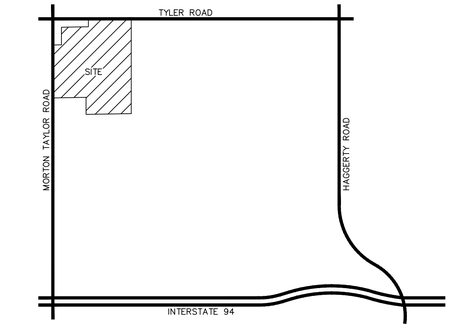
QUANTITY	ITEM
10 l.f.	2" Type "K" Copper Water Lead
67 l.f.	6" C-900 Water Main, CL235, DR18
1334 l.f.	8" C-900 Water Main, CL235, DR18
137 l.f.	Bore and Jack 20" Smooth Wall Casing, 2 Locations, Wayne County Department of Public Services Standard
2 ea.	Tapping Sleeve and Valve in Well, Van Buren Township Standard
2 ea.	8" Valve and Well, Van Buren Township Standard
4 ea.	Fire Hydrant Assembly, Van Buren Township Standard.

STORM SEWER

QUANTITY	ITEM
479 l.f.	6" Perforated PVC Edge Drain, Wayne County Department of Public Services Standard
336 l.f.	6" PVC, Sched. 40
354 l.f.	8" PVC, Sched. 40
1174 l.f.	12" Reinforced Concrete Pipe, C-76, Class IV
415 l.f.	15" Reinforced Concrete Pipe, C-76, Class IV
502 l.f.	18" Reinforced Concrete Pipe, C-76, Class IV
245 l.f.	24" Reinforced Concrete Pipe, C-76, Class IV
162 l.f.	30" Reinforced Concrete Pipe, C-76, Class IV
67 l.f.	Bore and Jack 18" Smooth Wall Casing, 2 Locations, Wayne County Department of Public Services Standard
8 ea.	2' I. Dia. Inlet, Frame and Cover EJ 1040N or Equal, 2' Sump, Wayne County Department of Public Services Standard
6 ea.	4' I. Dia. Catch Basin, Frame and Cover EJ 5105 or Equal, 2' Sump, Wayne County Department of Public Services Standard
5 ea.	4' I. Dia. Catch Basin, Frame and Cover EJ 1040N or Equal, 2' Sump, Wayne County Department of Public Services Standard
5 ea.	5' I. Dia. Manhole, Frame and Cover EJ 5105 or Equal, Wayne County Department of Public Services Standard
1 ea.	6' I. Dia. Manhole, Frame and Cover EJ 1040a or Equal, Wayne County Department of Public Services Standard
1 ea.	KSI Pretreatment Structure
1 ea.	KSI Pump Station
1 ea.	Stand Pipe
6 ea.	Wayne County Department of Public Services Standard
1 ea.	15" Concrete End Section with Rip-Rap, Wayne County Department of Public Services Standard
1 ea.	30" Concrete End Section with Rip-Rap, Wayne County Department of Public Services Standard
385 l.f.	Clean-out Existing Storm Sewer Before and After Construction, Wayne County Department of Public Services Standard

PAVING

QUANTITY	ITEM
695 l.f.	6" Concrete Curb with Reverse Gutter Pan
1626 l.f.	6" Concrete Curb and Gutter
544 l.f.	1.5' Wide Concrete Transition
838 l.f.	7' Wide Concrete Walk with Curb
904 s.y.	5' Wide Concrete Walk
5545 s.y.	3" Asphalt on 6" Aggregate Base
567 s.y.	8" Concrete with Integral 6" Curb for Approaches, Wayne County Department of Public Services Standard
128 s.y.	2" Asphalt on 8" Concrete Tapers, Wayne County Department of Public Services Standard
721 s.y.	Remove Existing Paving and Replace with 2" Asphalt on 8" Concrete, Wayne County Department of Public Services Standard
267 s.y.	6" Gravel Shoulder, Wayne County Department of Public Services Standard



LOCATION MAP
SCALE: 4"=1 MILE

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

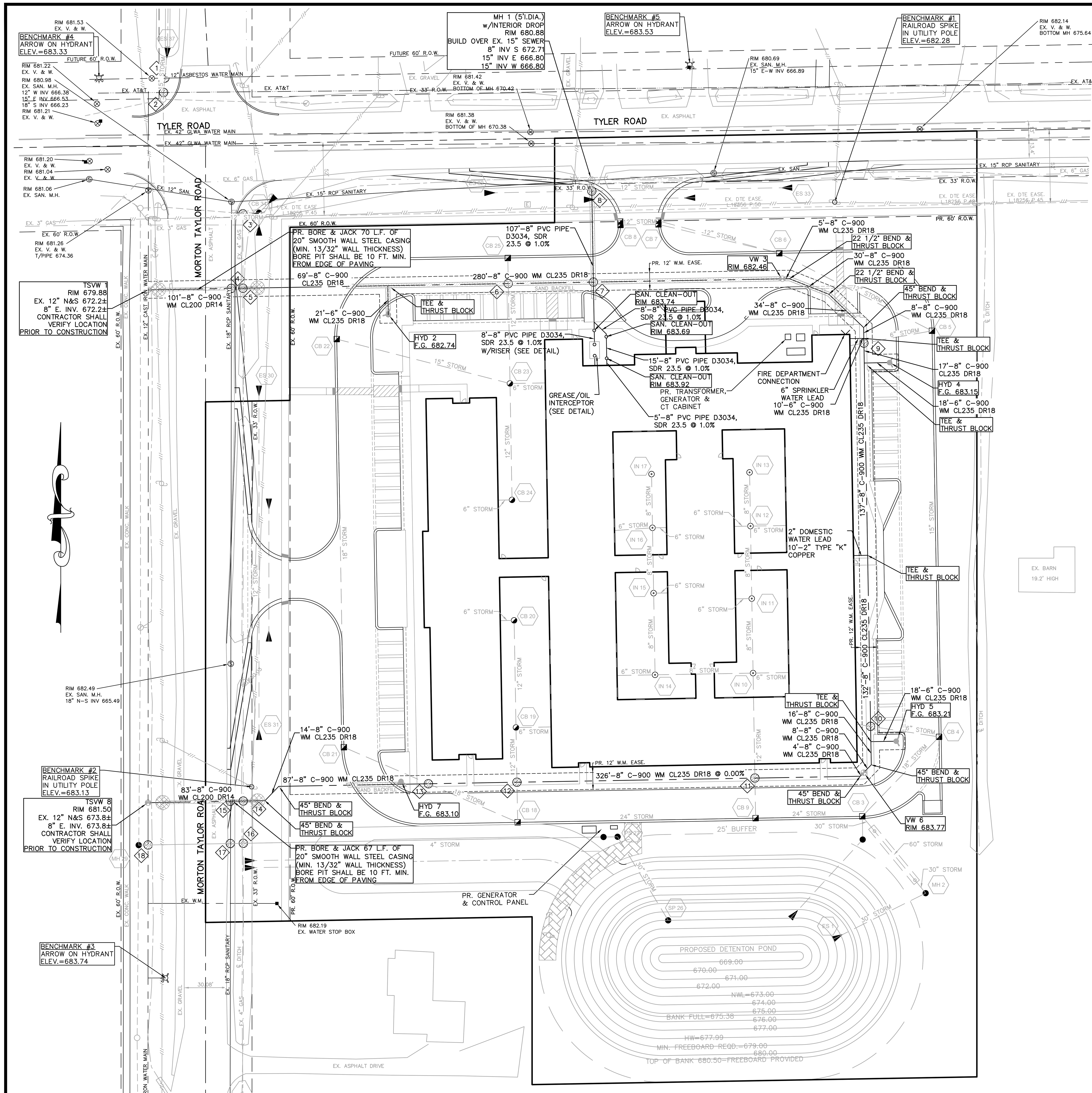
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

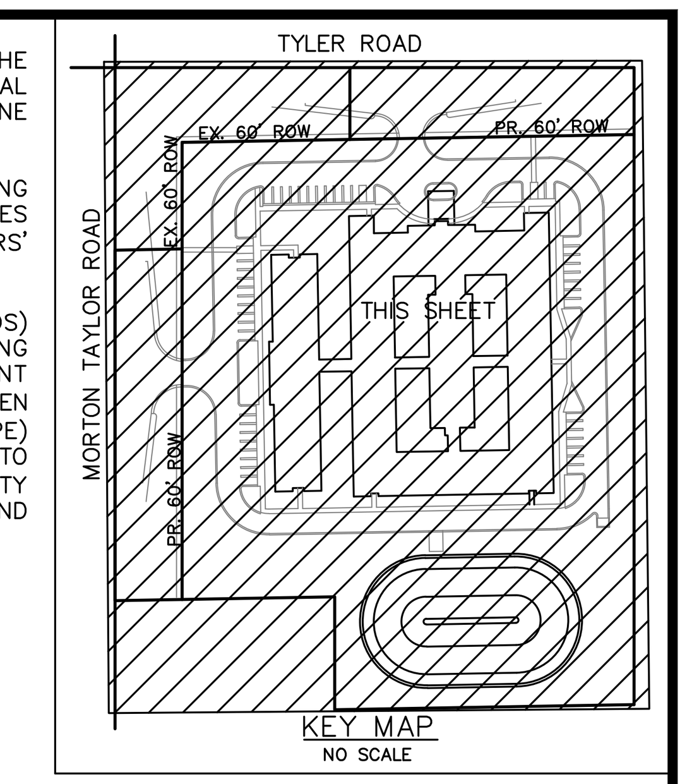
HAMPTON MANOR OF VAN BUREN TOWNSHIP OVERALL UTILITY PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 08

F:\19\19-249\Drafting & Engineering\Engineering\19-249-01-08-SitePlan.dwg, 08-Util, 5/19/2021 10:37:35 AM, laura.ambros





KEY MAP
NO SCALE

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

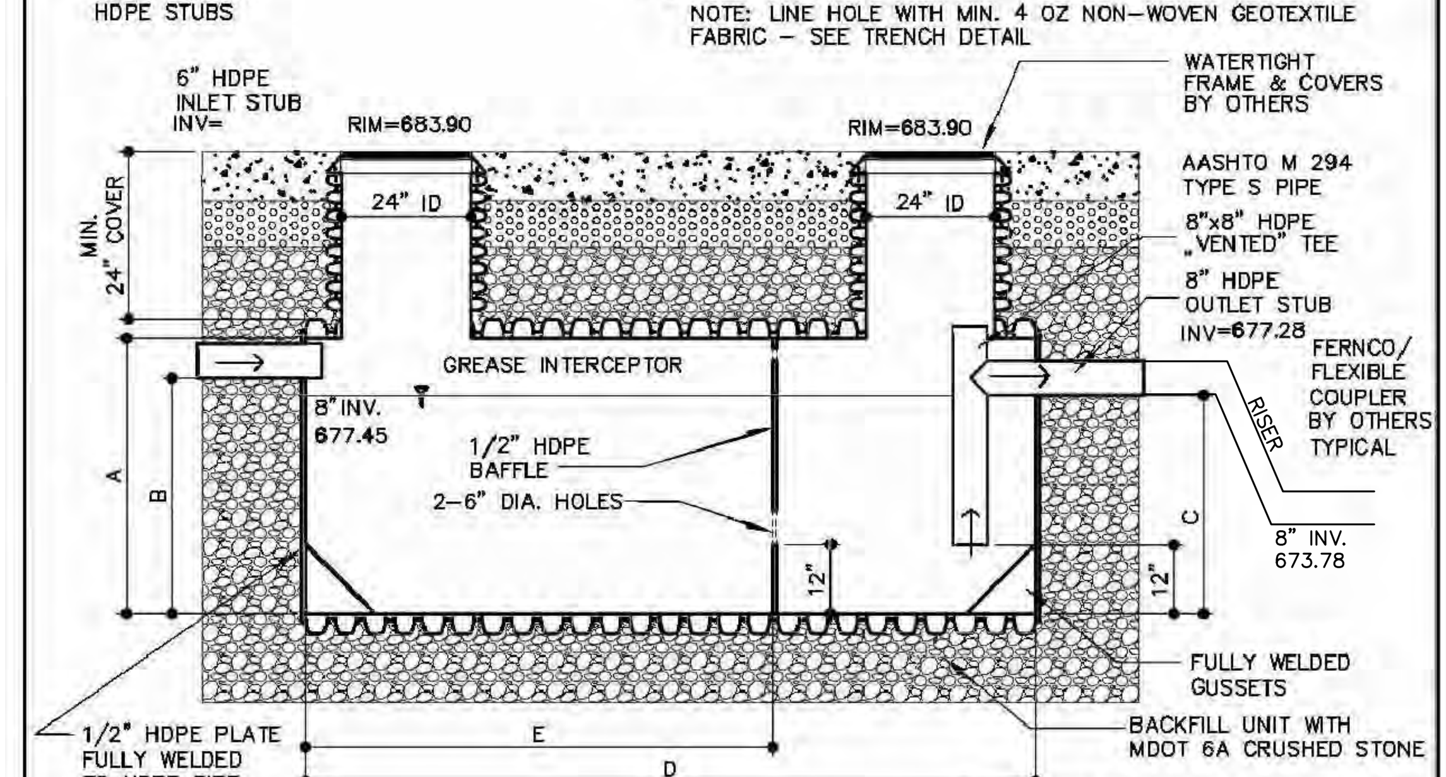
KSI HDPE GRAVITY GREASE/GRIT INTERCEPTOR TANK

NOTE: INSTALL UNIT PER ASTM D2321

KSI GGGI UNITS COMPLY WITH 2015 MICHIGAN PLUMBING CODE, CHAPTER 10, SECTION 1003.3.6, GRAVITY GREASE INTERCEPTORS

* COMPLIES WITH IAPMO/ANSI Z1001
* COMPLIES WITH ASTM F2649

NOTE: LINE HOLE WITH MIN. 4 OZ NON-WOVEN GEOTEXTILE FABRIC – SEE TRENCH DETAIL



CROSS SECTION
NO SCALE

INTERCEPTOR TANK DIMENSIONS

MODEL NO.	A	B	C	D	E
300 GALLON	36"	29"	27"	85"	64"
500 GALLON	48"	41"	39"	74"	56"
750 GALLON	48"	41"	39"	110"	83"
1000 GALLON	48"	41"	39"	147"	111"
1250 GALLON	60"	53"	51"	113"	85"
1500 GALLON	60"	53"	51"	136"	102"
1750 GALLON	60"	53"	51"	158"	118"
2000 GALLON	60"	53"	51"	181"	136"

** SMALLER & LARGER TANKS AVAILABLE

*** H20/HS25 RATED AT >2 FT COVER

OPTIONAL
GEOGRID, 5 FT BEYOND EXCAVATED AREA IN ALL DIRECTIONS, WHERE THERE IS LESS THAN 2 FT OF COVER OVER TOP OF CHAMBER – CONTACT KSI FOR SHALLOW AND DEEP BURY DETAILS.

INSTALLATION NOTE:
HDPE GRAVITY GREASE/GRIT INTERCEPTOR SHALL BE INSTALLED IN ACCORDANCE WITH ASATM D2321. CARE SHOULD BE EXERCISED WITH CONSTRUCTION EQUIPMENT DURING INSTALLATION TO PROTECT THE UNIT FROM DAMAGE DUE TO POINT AND IMPACT LOADING. USE AN EXCAVATOR TO PLACE THE STONE AROUND AND ABOVE THE UNIT IS PREFERRABLE. COMPACTION OF THE 6A STONE IN 8 INCH LIFTS TO 12 INCHES ABOVE THE UNIT. USE A VIBRATORY COMPACTOR, NOT A HOE PACK. PLACE THE REMAINING STONE USING A TRACKED PIECE OF EQUIPMENT (DOZER) OR CONTINUE USING THE EXCAVATOR. DO NOT USE RUBBER TIRED EQUIP. ONCE THE UNIT IS INSTALLED, PLACE AN ORANGE SAFETY FENCE 4–5 FT HIGH W/ TEE POST, AROUND THE UNIT. PLACE FENCE 5 FT BEYOND THE FOOTPRINT OF THE UNIT. ANY DAMAGE TO THE UNIT AS A RESULT OF NOT FOLLOWING INSTRUCTIONS AND THE BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR THE UNIT TO KSI'S SATISFACTION. IF GIVEN IN WRITING, A 3–4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE ON SITE DURING INSTALLATION.

DESIGN BY: AG / RK — REV: 1-1-2020 — DATE: 1-22-09 — 1 OF 1 — MANUF. APPROVAL BY: . — SCALE: NTS — SHEET NO. — DRAWING NO. GREASE INTERCEPTOR v4

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144

PROPOSED LEGEND
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

Utility Crossings

Crossing #	Sanitary Diameter	Sanitary Top	Sanitary Bottom	Water Main Diameter	Water Main Top	Water Main Bottom	Storm Diameter	Storm Top	Storm Bottom	Ex. Misc. Util. Diameter	Ex. Misc. Util. Top	Ex. Misc. Util. Bottom	Clearance	Lower Water Main	Ground
1				12	676.26	675.26	12	679.09	677.76				0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00	0.00		0.00
3							12	679.63	678.29	4	677.32	676.99	0.97		680.32
4	18	667.80	665.88	8	675.22	674.55							6.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69	2.67		679.02
6				8	674.74	674.07	12	677.57	674.07				1.50	Yes	682.04
7	8	674.19	673.52	8	676.64	675.97							1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97				3.92		680.55
9				8	676.63	675.97	6	678.88	678.13				1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78				1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04				1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96				1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31				1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90	2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40							8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5	2.60		682.06
17	18	667.01	665.09				4	673.90	673.57				6.56		682.06
18				12	675.50	674.50	4	677.92	677.59				2.09		681.50

SEE SHEET 22 FOR MORTON TAYLOR AND TYLER ROAD UTILITY CROSSING PROFILES
SEE SHEETS 25-29 FOR WCDPS STANDARD NOTES AND DETAILS

FIRE DEPARTMENT NOTES:
1. THE PROPOSED FIRE DEPARTMENT CONNECTION IS LOCATED ON THE NORTH WALL NEAR THE EAST CORNER OF THE BUILDING.
2. THE FIRE DEPARTMENT CONNECTION SHALL BE A 4 INCH STORTZ FITTING WITH A 30 DEGREE DOWNTURN AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
3. FIRE HYDRANTS SHALL BE TWO 4 INCH STORTZ CONNECTIONS NOT THREADED.
4. THE BUILDING SHALL BE PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA13, STANDARD FOR THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS.
5. THE ARCHITECT AND FIRE DEPARTMENT SHALL COORDINATE FOR THE LOCATION OF A KNOX BOX ELOCK SYSTEM.
6. EMERGENCY RESPONDER RADIO COVERAGE SYSTEM IS REQUIRED UNLESS IT CAN BE PROVEN AFTER BUILDING IS CONSTRUCTED AND OCCUPIED THAT COVERAGE IS SUFFICIENT. THIS WILL BE VERIFIED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO FINAL CERTIFICATE OF OCCUPANCY.

WATER MAIN LISTING:
1334 L.F. OF 8" DIAMETER WATER MAIN AND 67 L.F. OF 6" DIAMETER WATER MAIN WITHIN AN EASEMENT IN A PROPOSED SENIOR LIVING DEVELOPMENT ON THE SOUTHEAST CORNER OF TYLER ROAD AND MORTON TAYLOR ROAD, PART OF SECTION 14, T.3S., R.8E., VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN.

WATER MAIN NOTES:
1. CONNECTION TO THE EXISTING WATER MAIN SHALL NOT OCCUR UNTIL ALL REQUIRED HYDROSTATIC AND BACTERIOLOGICAL TESTING HAS BEEN SUCCESSFULLY COMPLETED AND ACCEPTED BY THE TOWNSHIP ENGINEER.
2. 8" & 6" WATER MAIN SHALL BE AWWA C900, PRESSURE CLASS 235, DR 18 WITH PUSH ON JOINTS. DIRECTIONAL BORE 8" WATER MAIN SHALL BE AWWA C900, PRESSURE CLASS 200, DR 14.
3. ALL WATER MAIN AND WATER SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF VAN BUREN TOWNSHIP.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

HAMPTON MANOR OF VAN BUREN TOWNSHIP
WATER MAIN BASIS OF DESIGN
INITIAL AND ULTIMATE FLOW

84 Beds in 80 Units										
Residential Equivelant Units	=	0.39	per bed	=	32.76					
POPULATION=	3	PEOPLE/UNIT								
TOTAL POPULATION=	98.28	PEOPLE								
AVERAGE FLOW=	98.28	PEOPLE x	150	GPCD	=	0.023	CFS	=	0.00045	MGD
	86400	SEC/DAY x	7.48	GAL/CF						
PEAK FLOW=										
2 TIMES AVERAGE FLOW										
=	29484	GPD	=	0.046	CFS	=	0.00090	MGD		
TOTAL AVERAGE FLOW=	0.023	C.F.S.	=	0.00045	MGD					
TOTAL PEAK FLOW=	0.046	C.F.S.	=	0.00090	MGD					

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

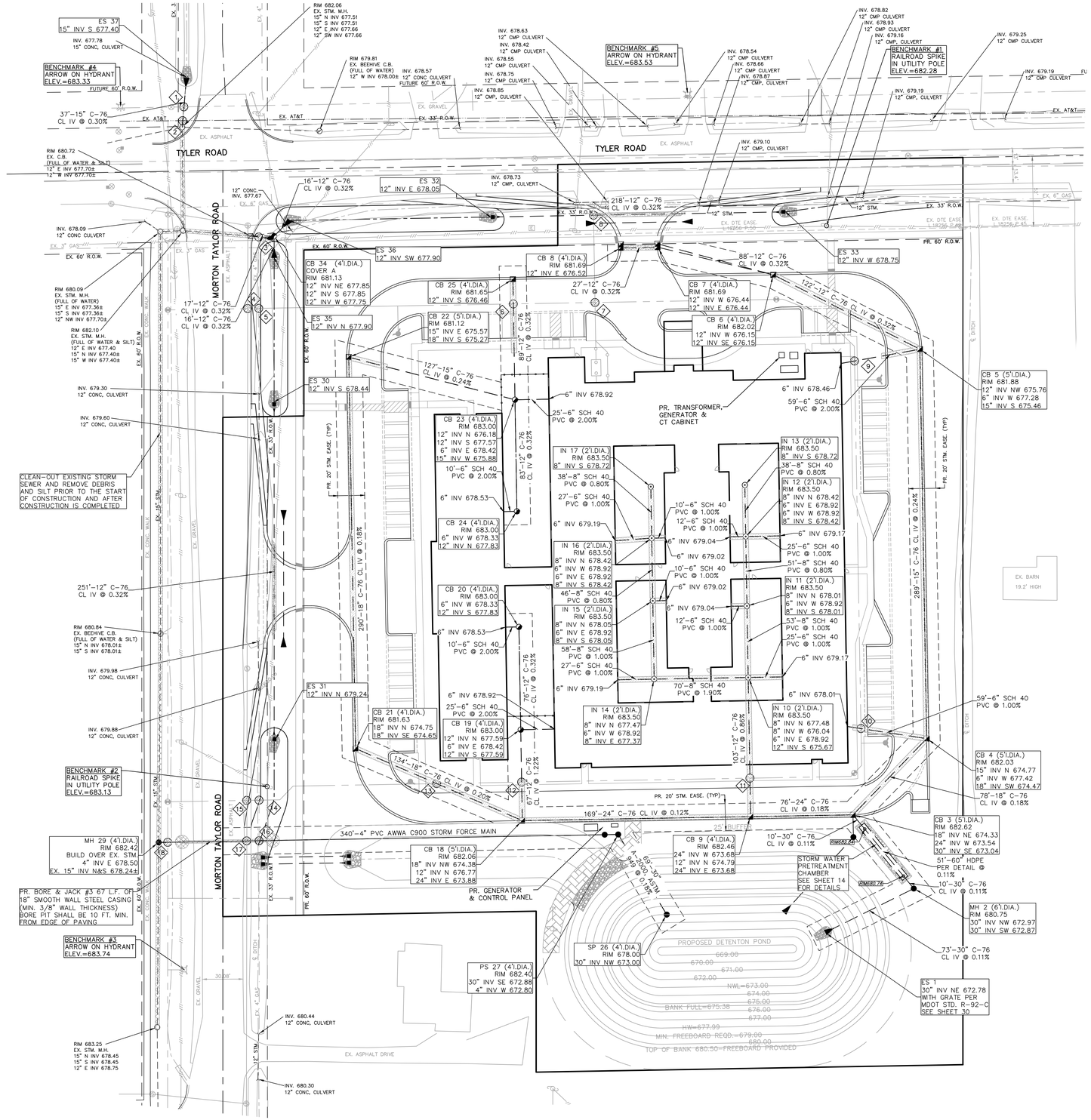
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP WATER MAIN AND SANITARY SEWER PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1'=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 09

I:\19\19-249\Drafting & Engineering\Engineering\19-249-09-12-Wm-San-Stm.dwg, 09-Wm-San, 5/19/2021 11:12:37 AM, laura.ambros



BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

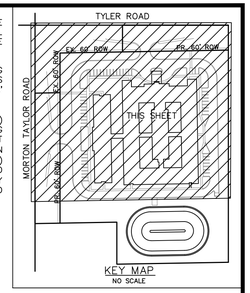
SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES



KEY MAP
NO SCALE

PROPOSED LEGEND
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 — STORM STRUCTURE NUMBER
- MH 1 — SANITARY STRUCTURE NUMBER
- HYD 1 — WATER STRUCTURE NUMBER
- 1 — UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

Utility Crossings															
Crossing #	Sanitary	Sanitary	Sanitary	Water Main	Water Main	Water Main	Storm	Storm	Storm	Ex. Misc.	Ex. Misc. Util	Ex. Misc. Util	Clearance	Low er	Ground
	Diameter	Top	Bottom	Diameter	Top	Bottom	Diameter	Top	Bottom	Util. Diameter	Top	Bottom		Water Main	
1				12	676.26	675.26	12	679.04	677.76				0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00	0.00		0.00
3							12	679.63	678.29	4	677.32	676.99	0.97		680.32
4	18	667.80	665.88	8	675.22	674.55							6.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69	2.67		679.02
6				8	674.74	674.07	12	677.57	674.07				1.50	Yes	682.04
7	8	674.19	673.52	8	676.64	675.97							1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97				3.92		680.55
9				8	676.63	675.97	6	678.88	678.13				1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78				1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04				1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96				1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31				1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90	2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40							8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5	2.60		682.06
17	18	667.01	665.09				4	673.90	673.57				6.56		682.06
18				12	675.50	674.50	4	677.92	677.59				2.09		681.50

SEE SHEET 22 FOR MORTON TAYLOR AND TYLER ROAD UTILITY CROSSING PROFILES
SEE SHEETS 25-29 FOR WCDPS STANDARD NOTES AND DETAILS

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

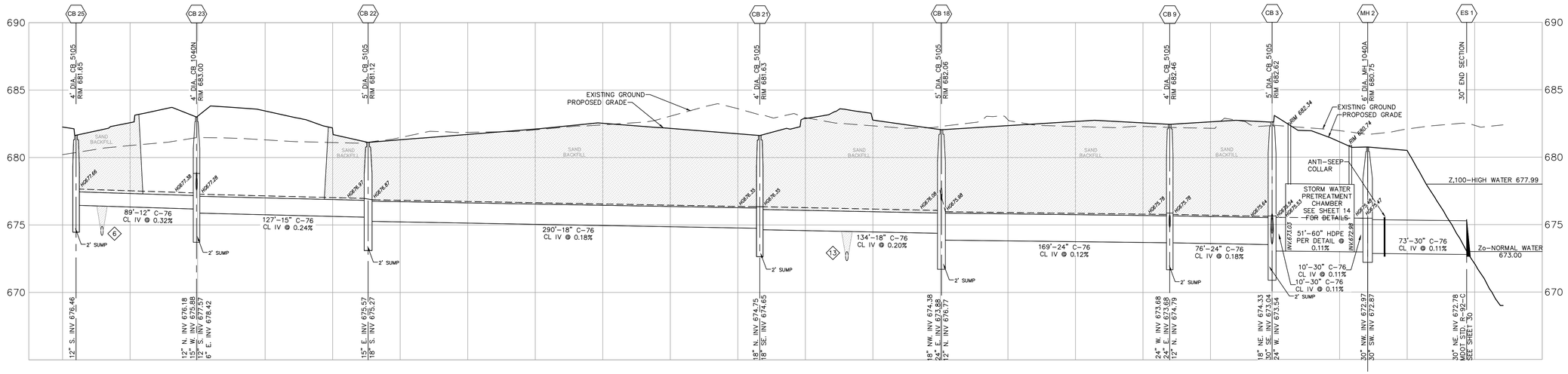
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

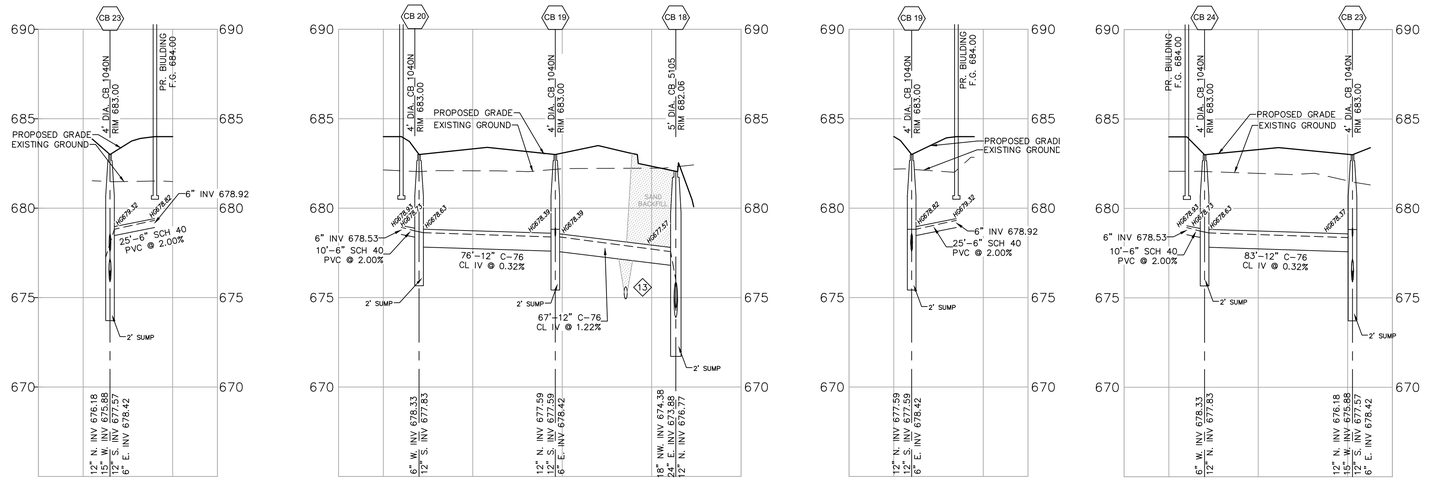
HAMPTON MANOR OF VAN BUREN TOWNSHIP STORM SEWER PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: .
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 10

F:\19\19-249\Drafting & Engineering\Engineering\19-249-09-12-Wm-San-Strm.dwg, 10-Storm, 5/19/2021 11:19:53 AM, laura.ambos





Utility Crossings														
Crossing #	Sanitary	Sanitary	Sanitary	Water Main	Water Main	Water Main	Storm	Storm	Storm	Ex. Misc.	Ex. Misc. Util	Ex. Misc. Util	Clearance	Low er	Ground
	Diameter	Top	Bottom	Diameter	Top	Bottom	Diameter	Top	Bottom	Util. Diameter	Top	Bottom		Water Main	
1				12	676.26	675.26	12	679.09	677.76				0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00	0.00		0.00
3							12	679.63	678.29	4	677.32	676.99	0.97		680.32
4	18	667.80	665.88	8	675.22	674.55							6.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69	2.67		679.02
6				8	674.74	674.07	12	677.57	674.07				1.50	Yes	682.04
7	8	674.19	673.52	8	676.64	675.97							1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97				3.92		680.55
9				8	676.63	675.97	6	678.88	678.13				1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78				1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04				1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96				1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31				1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90	2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40							8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5	2.60		682.06
17	18	667.01	665.09				4	673.90	673.57				6.56		682.06
18				12	675.50	674.50	4	677.92	677.59				2.09		681.50

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

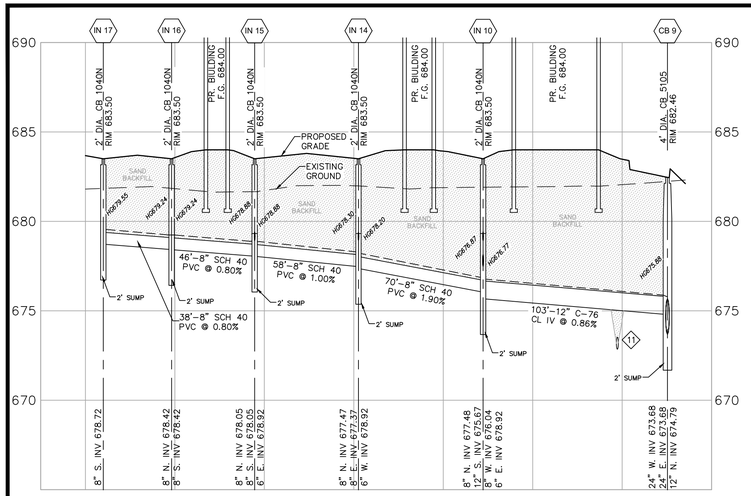
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

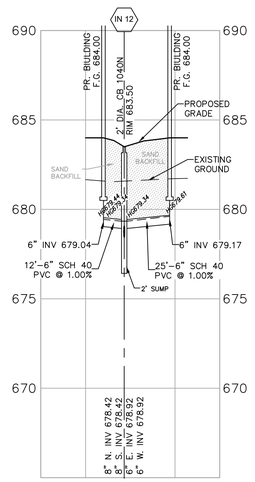
HAMPTON MANOR OF VAN BUREN TOWNSHIP STORM SEWER PROFILES

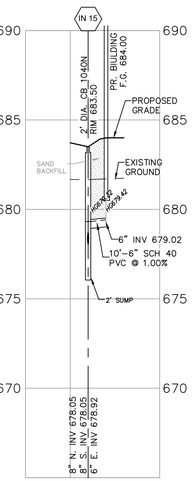
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

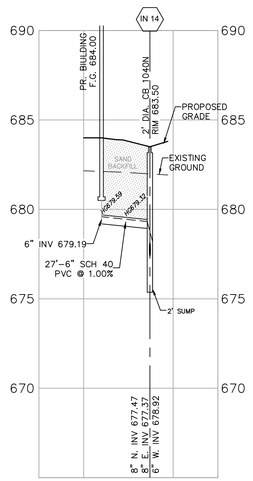
Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 11

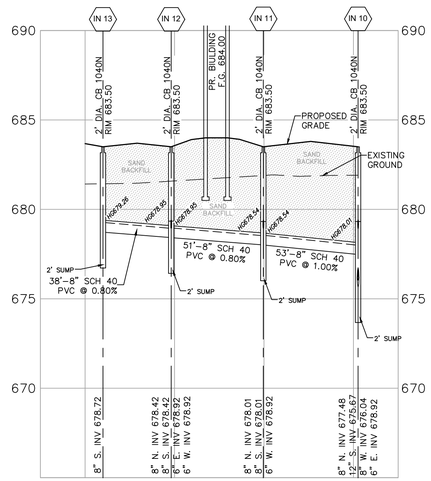
F:\19\19-249\Drafting & Engineering\Engineering\19-249-09-12-WmSan-Strm.dwg, 11-Storm Profiles, 5/19/2021 11:24:51 AM, laura.ambos

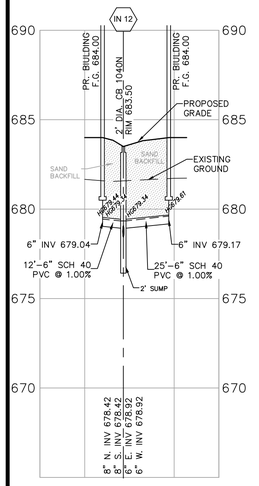


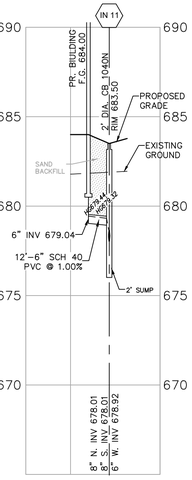


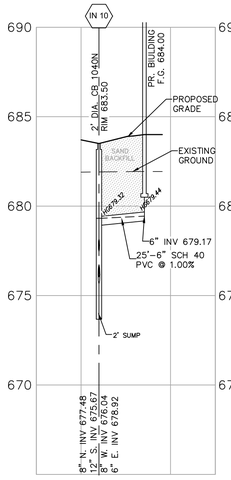


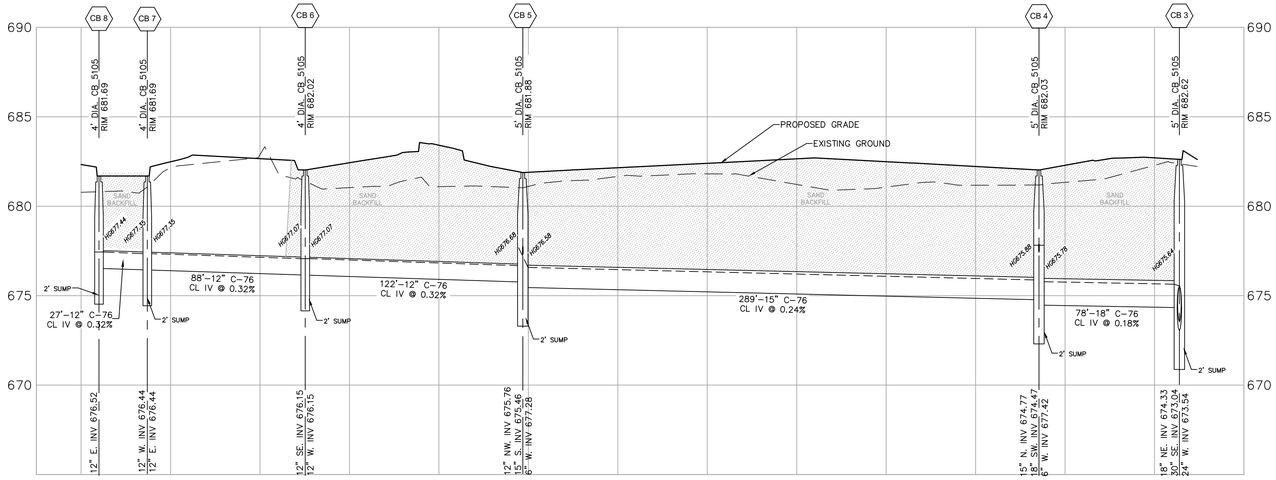


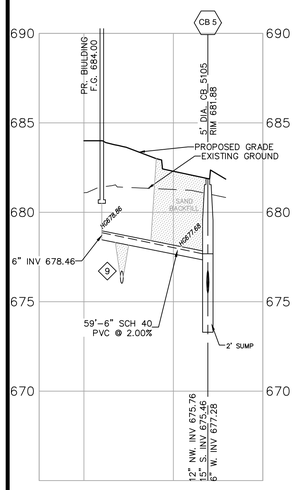


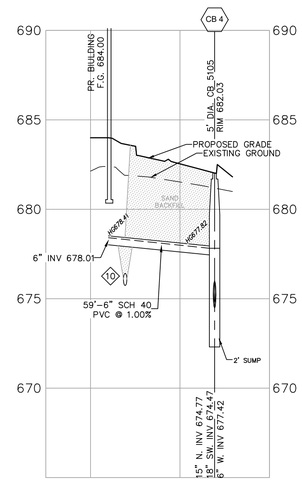












Utility Crossings

Crossing #	Sanitary	Sanitary	Sanitary	Water Main	Water Main	Water Main	Storm	Storm	Storm	Ex. Misc.	Ex. Misc. Util	Ex. Misc. Util	Clearance	Lower	Ground
	Diameter	Top	Bottom	Diameter	Top	Bottom	Diameter	Top	Bottom	Util	Diameter	Top	Bottom	Water Main	
1				12	678.28	675.28	12	679.09	677.76				0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00	0.00		0.00
3							12	679.63	678.29	4	677.32	676.99	0.97		680.32
4	18	667.80	665.88	8	675.22	674.55							6.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69	2.67		679.02
6				8	674.74	674.07	12	677.57	674.07				1.50	Yes	682.04
7	8	674.19	673.52	8	676.64	675.97							1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97				3.92		680.55
9				8	676.63	675.97	6	678.88	678.13				1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78				1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04				1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96				1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31				1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90	2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40							8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5	2.60		682.06
17	18	667.01	665.09				4	673.90	673.57				6.56		682.06
18				12	675.50	674.50	4	677.92	677.59				2.09		681.50

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

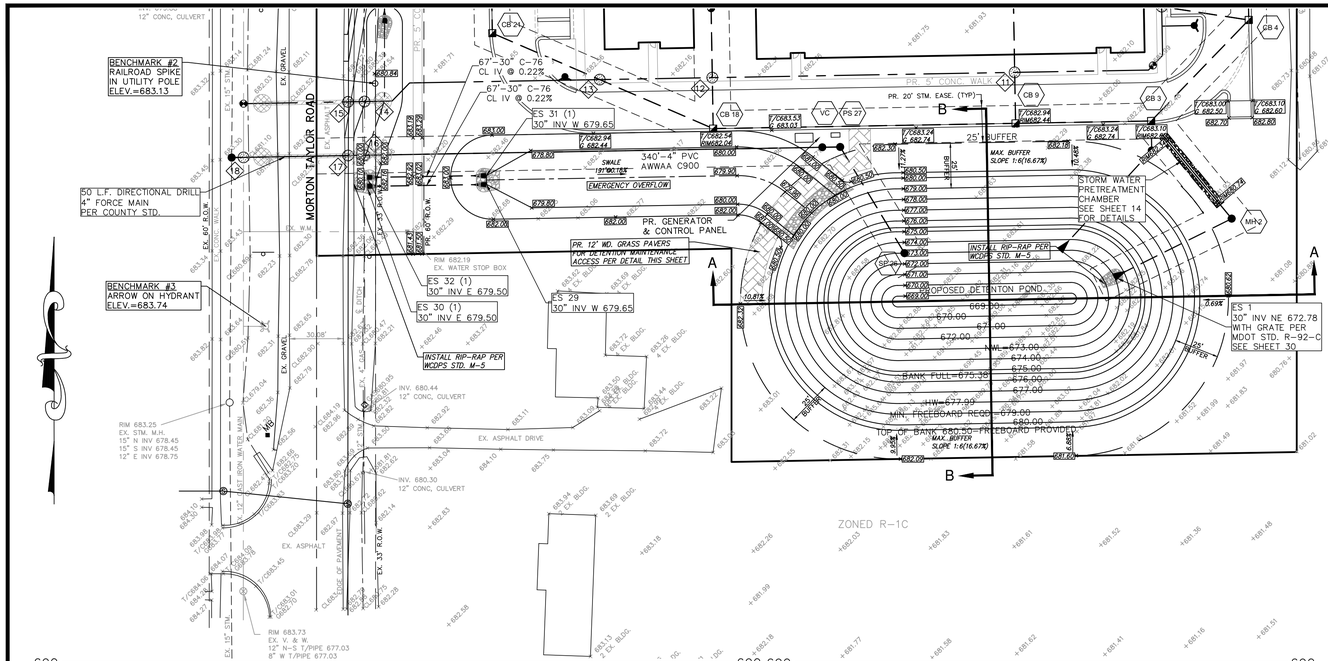
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP STORM SEWER PROFILES

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

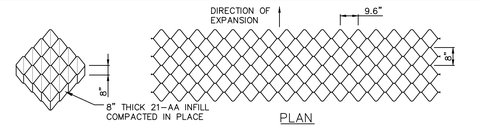
Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 12

F:\19\19-249\Drafting & Engineering\Engineering\19-249-09-12-Wm-Swr-Strm.dwg, 12-Storm Profiles, 5/19/2021 11:28:29 AM, laura.ambros

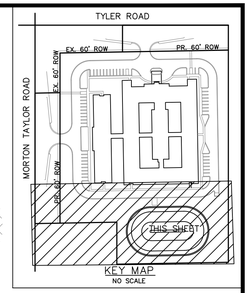


BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM



GRASS PAVERS FOR DETENTION BASIN MAINTENANCE ACCESS
(N.T.S.)



DETENTION POND OVERFLOW

OVERFLOW REQUIRED FOR 10 YEAR STORM			
Q=CiA			
Weighted C=	0.75		
I=151.8/(T+19.9)	4.35		
A=	6.39	ac	
Q=	**20.95**	cfs	
OVERLAND OVERFLOW PROVIDED			
Channel			
Trapezoidal			
Base Width	32	ft	
Depth	0.50	ft	
Side Slope (ft)	1	on	6
Side Length=	3.04	ft	
Top Width=	38.00	ft	
Area (A)=	17.50	sf	
Wetted Perimeter (P)=	38.08	ft	
Hydraulic Radius (R)=	0.46	ft	
Roughness Coefficient (n)=	0.03		
Slope (%)=	0.18	%	
Velocity Flowing Full (v)=	1.25	sft/sec	
Capacity (Q)=	**21.90**	cfs	

WAYNE COUNTY DETENTION CALCULATIONS FOR 100 YEAR STORM

Wayne County Storm Water Management Standards Section 11.1

SURFACE		AREA A				Cimp	A*C
Net Site Area	=	278150.00	sf	6.385	acres		
Pervious (Open Space, Soil Group D)	=	111504.00	sf	2.560	acres	0.45	1.152
Water	=	25412.00	sf	0.583	acres	1.00	0.583
Impervious (Building & Paving)	=	141234.00	sf	3.242	acres	0.95	3.080
Total	=	278150.00	sf	6.385	acres		4.815
C ave	=	0.7541	imp				
A (area)	=	6.385	acres				
C ave	=	0.754	imp				
Frontage (Morton Taylor Road)	=	492.87	ft				
Frontage (Tyler Road)		488.00	ft				
Qa (allowable)	=	0.9578	cfs	=	0.15*A		
Qa (allowable)(Morton Taylor Road)	=	0.5077	cfs	=	0.103*frontage/100		
Qa (allowable)(Tyler Road)	=	0.5006	cfs	=	0.103*frontage/100		
Qa (Van Buren Twp.)	=	0.6385	cfs	=	0.10*A		
Qa (Pumped)	=	0.4479	cfs	=	Pump Outflow		
Qa (use smaller value)	=	**0.4479**	cfs				
Qo (max)	=	0.0930		=	Qa/(A*C)		
T100	=	416.9261		=	45+SQRT(19845/Qo)		
Vs, 100	=	14378.6187		=	17649*T100/(T100+45) 40*Qe*T100		
Vt, 100	=	69239.5516	cu ft	=	Vs100*A*C		
Vt bf	=	24847.7336	cu ft	=	5160*A*C		
Vt ff not required-mechanical forebay	=	0.000	cu ft	=	1615*A*C		
Vt,100 adjusted	=	**69239.5516**	cu ft	=	Vt,100-Vt ff		
Vt bf adjusted	=	**24847.7336**	cu ft	=	Vt bf-Vt ff		

DETENTION PROVIDED (100 Yr. Storm)

	Contour	Area	Ave. Area	Increment	Volume cft	Summation cft
Zo (Normal Water)	673.00	7157.90				
			8464.24	1.00	8464.24	8464.24
	674.00	9810.57				
			11085.01	1.00	11085.01	19549.25
	675.00	12359.45				
Zbf Elevation (Bank Full)=675.38			13716.99	1.00	13716.99	33266.23
	676.00	15074.52				
			16560.15	1.00	16560.15	49846.38
	677.00	18045.78				
			19644.51	1.00	19644.51	69490.89
Z100 (High Water)=677.99	678.00	21243.24				
					TOTAL=	**69490.89** cft
						251.34 cft xtra

Utility Crossings

Crossing #	Sanitary Diameter	Sanitary Top	Sanitary Bottom	Water Main Diameter	Water Main Top	Water Main Bottom	Storm Diameter	Storm Top	Storm Bottom	Ex. Misc. Util. Diameter	Ex. Misc. Util Top	Ex. Misc. Util Bottom	Clearance	Lower Water Main	Ground
1				12	676.26	675.26	12	679.09	677.76				0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00	0.00		0.00
3							12	679.63	678.29	4	677.32	676.99	0.97		680.32
4	18	667.80	665.88	8	675.22	674.55							0.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69	2.67		679.02
6				8	674.74	674.07	12	677.57	674.07				1.50	Yes	682.04
7	8	674.19	673.52	8	678.64	675.97							1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97				3.92		680.55
9				8	676.63	675.97	6	678.88	678.13				1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78				1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04				1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96				1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31				1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90	2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40							8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5	2.60		682.06
17	18	667.01	665.09				4	673.90	673.57				6.56		682.06
18				12	675.50	674.50	4	677.92	677.59				2.09		681.50

POND CROSS SECTION A-A
SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=4'

POND CROSS SECTION B-B
SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=4'

POND OUTLET
SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=4'

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

PROPOSED LEGEND
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG — UG — UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 — STORM STRUCTURE NUMBER
- MH 1 — SANITARY STRUCTURE NUMBER
- HYD 1 — WATER STRUCTURE NUMBER
- 1 — UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG — UG — UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

SEE SHEET 14 FOR STAND PIPE AND PRETREATMENT STRUCTURE

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

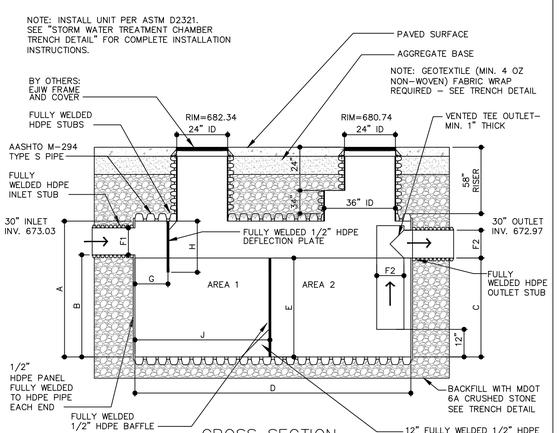
HAMPTON MANOR OF VAN BUREN TOWNSHIP DETENTION POND AND CALCULATIONS

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 13

F:\19\19-249\Drafting & Engineering\Engineering\19-249-13-16-Pond-Pump.dwg, 13-Detention Pond, 5/19/2021 11:12:21 PM, laura.ambros

STORM WATER TREATMENT CHAMBER
KSI SERIES 3500 HDPE CHAMBER



CROSS SECTION

STORM WATER TREATMENT CHAMBER DIMENSIONS AND CAPACITIES

MODEL NO.	A	B	C	D	E	F1	F2	G	H	J	AREA 1	AREA 2
3500-60-30	60"	27"	28"	609"	28"	30"	30"	30"	39"	304"	206 CF	678 CF

DESIGN BY: AG / RK	REV: 9-9-20	DATE: 10-10-08	1 OF 1
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.	
DRAWING NO. SERIES 3500 SWTC v3.19.14			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144

STORM WATER TREATMENT CHAMBER
INSTALLATION AND MAINTENANCE GUIDELINES

INSTALLATION GUIDELINES

1. EXCAVATE AREA FOR KSI SWTC AND PREPARE TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.

2. THE KSI SWTC SHALL BE INSTALLED ON A BED OF NO LESS THAN 12" MDOT 6A CRUSHED STONE MATERIALS COMPACTED TO 95% PROCTOR DENSITY. COMPACTED TO 95% (90% MIN. FOR MDOT 6A MATERIAL) OF THE BACKFILL MATERIAL'S MAXIMUM WEIGHT AT A MOISTURE CONTENT NOT GREATER THAN THE OPTIMUM.

3. INSTALL KSI SWTC UNIT, HIGH FLOW BYPASS LINE (IF APPLICABLE), DIVERSION STRUCTURE AND EXITING STRUCTURE AT ELEVATIONS INDICATED ON SITE PLAN. COUPLE INLET AND OUTLET STUBS WITH APPROPRIATE PIPE COUPLINGS, FERNCOS OR HDPE SPLIT COUPLERS TO CONVEYANCE PIPE.

4. BACKFILL UNIT WITH MDOT 6A CRUSHED STONE MATERIALS PER ASTM D2321. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.

5. THE HDPE ACCESS RISERS SHALL BE FIELD CUT TO FINISH GRADE BY THE CONTRACTOR. SEE RISER INSTALLATION OPTIONS PAGE.

6. KSI RECOMMENDS FILLING THE UNIT WITH WATER UPON COMPLETION OF INSTALLATION UP TO THE BAFFLE HEIGHT.

MAINTENANCE GUIDELINES

1. ALL STORM WATER TREATMENT CHAMBERS WILL REQUIRE PERIODIC MAINTENANCE DEPENDING ON SPECIFIC SITE CONDITIONS.

2. KSI RECCOMMENDS CLEANING THE SWTC QUARTERLY AND AFTER HEAVY RAIN STORMS. SEDIMENT IS EASIER TO REMOVE WHEN IT IS REMOVED ON A REGULAR BASIS.

3. DISPOSAL OF MATERIAL FROM THE KSI SWTC ARE SIMILAR TO THAT OF ANY OTHER BEST MANAGEMENT PRACTICES (BMP). LOCAL GUIDELINES SHOULD BE CONSULTED PRIOR TO DISPOSAL OF THE SWTC CONTENTS. PETROLEUM WASTE PRODUCTS SHOULD BE REMOVED BY A LICENSED WASTE MANAGEMENT COMPANY.

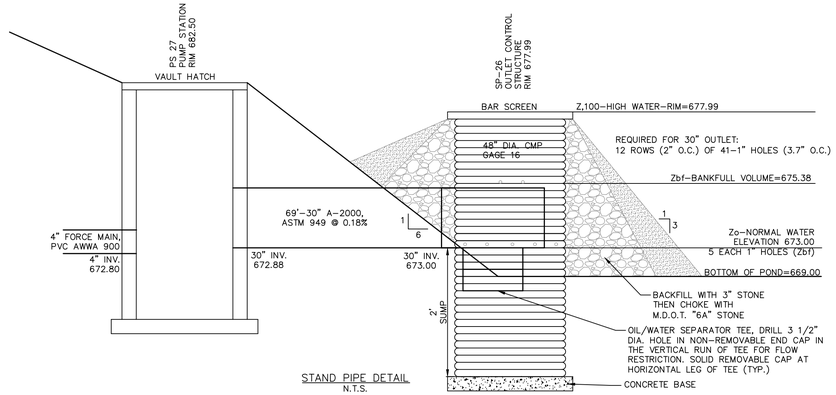
4. IF A HYDROCARBON REMOVAL SYSTEM WAS INSTALLED - REPLACE IT WHEN IT TURNS BLACK. UNIT CAN BE DISPOSED OF VIA NORMAL REFUSE REMOVAL. SPENT UNIT DOES NOT LEACH CAPTURED CONTAMINATES.

WHITE = NEW
GREAY = WORKING
BLACK = SPENT - NEEDS REPLACEMENT - CONTACT KSI FOR REPLACEMENT PARTS

5. AFTER CLEANING THE UNIT -KSI RECCOMMENDS REFILLING THE UNIT WITH WATER

DESIGN BY: AG / RK	REV: 5-11-2020	DATE: 4-17-08	1 OF 1
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.	
DRAWING NO. SWTC INSTALL & MAINT.			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144



STAND PIPE DETAIL
N.T.S.

Zbf Elevation (bank full)	=	**675.3848**	=	675.00+((676.00-675.00)*(24847.73-19569.25)/(33286.23-19569.25)	
Z,100 Elevation (high water)	=	**677.9872**	=	678.00+((678.00-677.00)*(69351.53)/(69490.89-49846.38)	
OUTLET SIZING FOR BANK FULL FLOOD					
Qavg (bf)	=	0.17255		= Vt bf/144000	
Havg bf	=	1.5907		= 0.667*(Zbf-Zo)	
Aout bf	=	0.0275		= Qavg bf/(0.62*SQRT(2*g*Havg))	
Dout bf	=	1.0000	in	= 0.00545 sq ft	
Hole #	=	5.0455		= Aout/0.00545	
Use		5	holes	@ 673.00	
Qavg (bf) (actual)	=	0.1716	cfs	= (0.62*Aout*(SQRT(2*g*Havg))	
Tbf	=	40.3639	hours	= Vt bf/(Qavg bf*3600)	
OUTLET SIZING FOR 100 YEAR FLOOD BASED ON PUMPED OUTFLOW OF 0.4479 CFS					
Qmax	=	0.4479	cfs	= Qa	
Zout bf		673.0073		normal water+Dout bf	
Hmax bf	=	4.9799		= Z.100-Zout bf	
Aout bf (actual)	=	0.0273	sq ft	= # holes*0.00545 (1" dia sq ft)	
Qmax bf	=	0.3026	cfs	= (0.62*Aout bf*(SQRT(2*g*Hmax bf))	
Q,100 max	=	0.1453	cfs	= Qmax-Qmax bf	
D,100 out		1.0000	in	= 0.00545 sq ft	
Z,100 out		675.5903		= Zbf+D,100 out	
H,100 max		2.5969		= Z,100-Zout (detention)	
A,100 out		0.0181		= Q,100 max/(0.62*(SQRT(2*g*H,100 max)))	
Hole #	=	3.3251		= A,100 out/0.00545	
Use		2	holes	@ 675.38	
Q,100 avg (actual)	=	0.0874	cfs	= (0.62*A,100 out*(SQRT(2*g*H,100 max))	
OUTLET SIZING FOR 100 YEAR FLOOD BASED 3.5" HOLE IN OIL/WATER SEPARATOR					
Qmax	=	0.4479	cfs	= Qa	
Zout bf		675.5000		normal water+Dout bf	
Hmax bf	=	2.4872		= Z,100-Zout bf	
Aout	=	0.0571	sq ft	= Qmax/(0.62*sqrt((2*g*h,max))	
Required Hole Size	=	0.2696	ft (dia)	= sqrt(Aout*(4/3.14))	
Dout	=	3.2357	in		
Qmax	=	0.4479	cfs	= 0.62*Ao*(sqrt(2*g*h))	
30" Outlet Pipe					
n	=	0.1300			
s	=	0.0000	ft/ft mn		
Use Slope	=	0.1800	%		
V	=	3.5468	(from stm calcs)		
Pipe Length	=	89	ft		
Downstream Invert	=	672.8758			
Q	=	17.4015	cfs		
Check Capacity of Holes above Bank Full Using 30" Outlet					
Elrm	=	677.9990			
Ebf	=	675.3848			
Provided Height	=	2.2719	ft	= (Elrm-Ebf)-4"	
Havg	=	1.7377		= (Elrm-Ebf)*0.667	
Hole Dia	=	1.0000	in	= 0.00545 sq ft	
Aout	=	2.6532		= Qi/(0.62*(SQRT(2*g*Havg))	
Hole #	=	**486.8268**		= 0.00545 sq ft	
Row # (12)	=	12			
Hole # per row	=	41			
Stand Pipe	=	48	in dia		
1" hole center to center (horizontal)	=	3.7152	in		
1" hole center to center (vertical)	=	0.1893	ft	= Provided height/Row #	
use	=	2	in		
Hbf avg		3.32647		= 0.667*(Z.100-Zo)	
Q	=	0.24953		= (0.62*Aout*(SQRT(2*g*H bf avg))	

Row	Invert Holes	h	Q	Qtotal
1	675.38481	2.60239	1.77464	1.77464
2	676.05148	2.43072	1.71687	3.49152
3	676.71815	2.26906	1.65709	5.14861
4	675.88481	2.10239	1.59508	6.74369
5	676.05148	1.93572	1.53055	8.27423
6	676.21815	1.76906	1.46317	9.73740
7	676.38481	1.60239	1.39254	11.12995
8	676.55148	1.43572	1.31814	12.44808
9	676.71815	1.26906	1.23927	13.68735
10	676.88481	1.10239	1.15503	14.84238
11	677.05148	0.93572	1.06414	15.90652
12	677.21815	0.76906	0.96473	16.87124
Q total			=	17.12

STAND PIPE (RISER):
1. RISERS AND OVERFLOW STRUCTURES SHOULD BE CONSTRUCTED OF 12-GAGE CORRUGATED METAL PIPE (CMP) CONFORMING TO ASTM A760 AND SHOULD BE MADE FROM ALUMINUM COATED SHEET CONFORMING TO AASHTO M274. THE USE OF THE CONTINUOUS WELDED SEAM PROCESS IN THE FABRICATING OF PIPE IS NOT PERMITTED. RISERS AND OVERFLOW STRUCTURES SHOULD HAVE A MINIMUM DIAMETER OF 36-INCHES.
2. RISER HOLES SHOULD BE 1 INCH MINIMUM DIAMETER BUT NO LARGER IN SIZE THAN THE SURROUNDING STONE. THE HOLES SHOULD BE SPACED A MINIMUM OF 4 INCHES APART, ON CENTER, BOTH VERTICALLY AND HORIZONTALLY. THE HOLES SHOULD BE PRE-DRILLED PRIOR TO GALVANIZING.
3. RISERS AND OVERFLOW STRUCTURES SHOULD HAVE A 2-FOOT DEEP SUMP AND A CONCRETE BASE OF 6-INCH MINIMUM THICKNESS. THE CONCRETE BASE SHOULD BE CONSTRUCTED OF EITHER PRE-CAST CONCRETE MEETING ASTM C478, OR CAST-IN-PLACE CONCRETE WITH A 28-DAY STRENGTH REQUIREMENT OF 3,500 PSI.
4. RISERS AND OVERFLOW STRUCTURES SHOULD BE SECURELY ATTACHED TO THE BASE. THEY MAY BE EMBEDDED IN CONCRETE OR AFFIXED BY AN APPROVED FASTENING METHOD.
5. THE TOP OF RISERS AND OVERFLOW STRUCTURES SHOULD BE EQUIPPED WITH A STEEL GRATE. OPENINGS SHOULD BE A MINIMUM OF 3 INCHES SQUARE AND A MAXIMUM OF 4 INCHES SQUARE.
6. STONE FILTER BACKFILL AROUND RISERS SHOULD CONSIST OF 3-INCH DIAMETER WASHED STONE, WITH AN OUTER BLANKET OF MOOT 6A STONE. THE SIDE SLOPE OF THE STONE BLANKET IS TYPICALLY 1 :4.
7. THE BERM ON WHICH AN EMERGENCY SPILLWAY RESTS SHOULD BE MADE OF APPROVED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL AND LARGE ROCKS (OVER 4 INCHES IN DIAMETER).
8. SUGGESTED OPTIONS FOR ARMORING SPILLWAYS INCLUDE RIP-RAP, TRI LOCK, GEOWEB WITH INFILL MATERIAL, AND REINFORCED TURF.
9. THE OUTLET "TEE" SHOULD BE EQUIPPED WITH A REMOVABLE CAP IN THE HORIZONTAL DIRECTION; THE VERTICAL LEG SHOULD SERVE AS AN OIL SEPARATOR. THE HORIZONTAL LEG OFTEN IS USED AS A CLEAN OUT. THE MINIMUM PREFERRED OUTLET PIPE DIAMETER IS 4 INCHES . AN ANT-SEEPAGE COLLAR SHOULD BE PROVIDED ON EACH OUTLET PIPE. THE ANTI-SEEPAGE COLLAR CONSISTS OF A WATERTIGHT JOINT; THE SPECIFICATIONS FOR WATERTIGHT JOINTS VARY DEPENDING ON THE TYPE OF MATERIAL USED FOR THE OUTLET PIPE.

(80% annual TSS removal baed on particle size)
August 2019

KSI Model	FLOW RATES: Wayne County 75 Micron	75 Micron	110 Micron
350	1.8 cfs	2.2 cfs	2.3 cfs
500	2.3 cfs	2.9 cfs	3.0 cfs
750	3.3 cfs	4.1 cfs	4.2 cfs
1000	4.1 cfs	5.1 cfs	5.3 cfs
1250	5.0 cfs	6.3 cfs	6.5 cfs
1500	6.2 cfs	7.8 cfs	8.1 cfs
1750	7.4 cfs	9.2 cfs	9.5 cfs
2000	8.3 cfs	10.4 cfs	10.7 cfs
2500	9.8 cfs	12.3 cfs	12.6 cfs
3000	11.3 cfs	14.1 cfs	14.5 cfs
3500	13.8 cfs	17.2 cfs	17.7 cfs
3750	16.3 cfs	20.4 cfs	21.0 cfs
4000	18.8 cfs	23.5 cfs	24.3 cfs
4500	20.0 cfs	25.2 cfs	25.8 cfs
5000	22.0 cfs	27.5 cfs	28.4 cfs
5500	24.0 cfs	30.0 cfs	31.0 cfs
6000	30.5 cfs	38.1 cfs	39.3 cfs

All KSI modes will require some form of customization to meet site specific conditions.
Please call KSI at 800-699-4046 for design assistance. Details and specifications are available.
The peak flow rate of an off-line system treats approximately one quarter to one third of the peak storm event. These flow rates typically represent 90% to 95% of the total annual runoff volume.
These models will remove greater than 90% of the free floating oils at the above design flow rates.

SITE DESIGN DATA			
Water Quality Flow Rate per Storm Sewer Calculations	=	13.27	cfs
Peak Flow Rate for KSI HDPE Treatment Chamber	=	13.8	cfs
Return Period of Peak Flow	=	10	years

STORM WATER TREATMENT CHAMBER TRENCH DETAIL

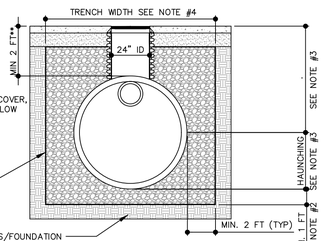
NOTES:
1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF MDOT 6A CRUSHED STONE AS DEFINED IN ASTM D2321, LATEST EDITION; AS AN ALTERNATIVE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC AND OR A GEOGRID.
2. BEDDING: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 12" FOR 36"-120" DIA. SWTC.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION, MAXIMUM TEN INCH (10") LIFTS.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MIN. TRENCH WIDTHS ARE AS FOLLOWS

NOMINAL I.D.	NOMINAL O.D.	MINIMUM RECOMM. TRENCH WIDTH
36"	42"	90"
48"	54"	102"
60"	66"	114"
72"	80.5"	129"
96"	105.9"	154"
120"	131.3"	190"

5. MINIMUM COVER: MINIMUM RECOMMENDED COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE AS SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF THE SWTC TANK TO THE GROUND SURFACE.

SURFACE LIVE LOAD	MINIMUM REQUIRED COVER FOR WAYNE COUNTY (ALL SIZES)
HS-25/H25 (FLEXIBLE PAVEMENT)	MIN. 24" AS MEASURED FROM THE BOTTOM OF THE FLEXIBLE PAVEMENT
HS-25/H25 (RIGID PAVEMENT)	MIN. 24" AS MEASURED FROM THE TOP OF THE RIGID PAVEMENT
E80 RAILWAY	24"
HEAVY CONSTRUCTION	48"

NOTE: ALSO SEE RISER INSTALLATION OPTIONS PAGE



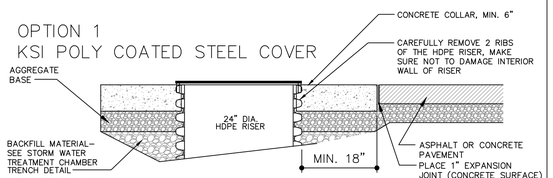
HDPE SWTC TANK DETAIL
SCALE: NONE

DESIGN BY: AG / RK	REV: 5-11-2020	DATE: 4-13-09	1 OF 1
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.	
DRAWING NO. SWTC INSTALLATION DETAIL			

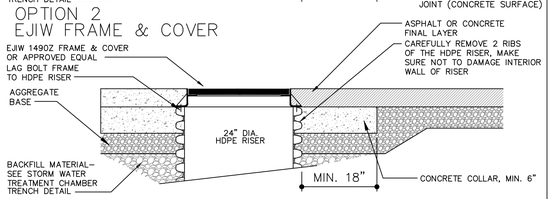
KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144

KSI RISER INSTALLATION OPTIONS
FOR PAVED SURFACE APPLICATIONS

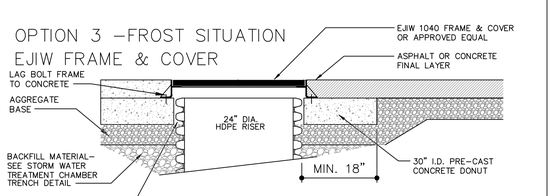
OPTION 1
KSI POLY COATED STEEL COVER



OPTION 2
EJIW FRAME & COVER



OPTION 3 -FROST SITUATION
EJIW FRAME & COVER



DESIGN BY: AG / RK	REV: 3-19-14	DATE: 8-29-07	1 OF 1
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.	
DRAWING NO. RISER INSTALLATION			

KSI — KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144

MECHANICAL TREATMENT UNIT AND OUTLET CONTROL STRUCTURE NOTES:

1. THE MANUFACTURER OF THE TREATMENT UNIT AND THE OUTLET CONTROL STRUCTURE MUST CONTACT THE WAYNE COUNTY TESTING OFFICE AT 734-858-2776 AT LEAST 3 WORKING DAYS PRIOR TO FABRICATION TO SCHEDULE FOR INSPECTION DURING MATERIAL FABRICATION.
2. PRIOR TO INSTALLATION, STORM WATER MANAGEMENT SYSTEM COMPONENTS SHALL BE TESTED AND APPROVED BY THE WAYNE COUNTY TESTING OFFICE, AND OBSERVED DURING THE INSTALLATION BY WAYNE COUNTY ENGINEER.
3. ALL CMP RISER HOLES MUST BE PRE-DRILLED PRIOR TO RISER GALVANIZATION. MANUFACTURER OF CMP RISERS MUST CONTACT THE WAYNE COUNTY TESTING OFFICE AT 734-858-2776 AT LEAST 3 WORKING DAYS PRIOR TO FABRICATION TO SCHEDULE FOR INSPECTION DURING FABRICATION.
4. A WAYNE COUNTY PERMIT ENGINEER MUST OBSERVE INSTALLATION OF ALL BASIN RISERS AND OUTLET PIPE.

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

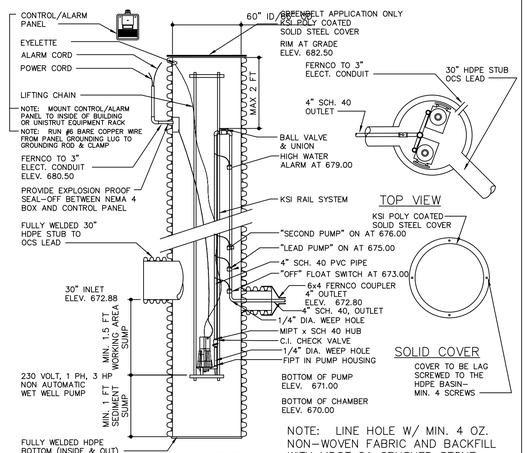
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR
OF VAN BUREN TOWNSHIP
STAND PIPE AND
SEDIMENT STRUCTURE
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	NO SCALE
Paper Size:	24"x36"
Date:	11-06-19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19-249
Sheet No.	14

F:\19\19-249\Drafting & Engineering\Engineering\19-249-13-16-Pond-Pump.dwg, 14-Pretreatment & Standpipe, 5/19/2021 8:35:57 AM, laura.ambos

KSI CUSTOM DUPLEX WET WELL PUMP
60" DIA. x 12.5 FT DEEP HDPE CHAMBER



TOP VIEW

SOLID COVER

COVER TO BE LAG SCREWED TO THE HDPE BASIN- MIN. 4 SCREWS

NOTE: LINE HOLE W/ MIN. 4 OZ. NON-WOVEN FABRIC AND BACKFILL WITH MDOT 6A CRUSHED STONE

CROSS SECTION

QTY.	PART NO.	DESCRIPTION
2	ZOELLER 6123	230 VOLT, 1 PH, 3 HP, NON AUTOMATIC PUMP
2	–	4" CHECK VALVE
2	–	4" BALL VALVE & UNION
1	–	DUPLEX CONTROL PANEL W/ ALARM (NEMA 4X)
1	–	60" DIA. HDPE BASIN W/ SOLID COVER
2	–	KSI RAIL SYSTEM W/ SUSPENDED BASE

KSI PROVIDES A ONE YEAR EQUIPMENT WARRANTY

DESIGN BY: AG / RK	REV: 9-9-20 DATE: 8-31-17	1 OF 1	KSI
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. HAMPTON MANOR VAN BUREN			

KENNEDY SOLUTIONS, INC.
2111 Sage Lake Road
Prescott, MI 48756
Ph: 800-499-4046
Fx: 248-375-8144

INSTALLATION INSTRUCTIONS
FOR KSI HDPE PUMP CHAMBER STRUCTURES
INSTALLATION GUIDELINES

1. EXCAVATE AREA FOR KSI STRUCTURE AND PREPARE TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.

2. THE KSI STRUCTURE SHALL BE INSTALLED ON A BED OF NO LESS THAN 24" MDOT 6A CRUSHED STONE BEDDING MATERIALS COMPACTED TO 95% PROCTOR DENSITY.

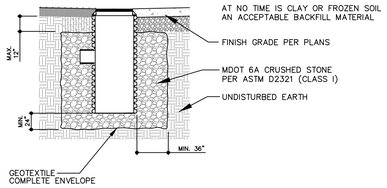
WRAP STRUCTURE ENVELOPE IN GEOTEXTILE (8 OZ. NON-WOVEN FABRIC)

3. INSTALL KSI STRUCTURES AT ELEVATIONS INDICATED ON SITE PLAN. COUPLE INLET AND OUTLET STUBS WITH APPROPRIATE PIPE COUPLINGS, FERNCOS OR HDPE DOUBLE BELL GASKETED COUPLERS TO CONVEYANCE PIPE.

4. BACKFILL UNIT WITH MDOT 6A CRUSHED STONE PER ASTM D2321. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.

5. DURING INSTALLATION, IT MAY BE NECESSARY TO FILL THE PUMP CHAMBER WITH WATER TO ASSIST WITH PLACEMENT. UPON COMPLETION OF INSTALL – FILL CHAMBER WITH WATER UP TO OUTLET ELEVATION.

6. INSTALL SAFETY FENCE – SEE NOTE BELOW.



INSTALLATION NOTE:
PUMP CHAMBER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. CARE SHOULD BE EXERCISED WITH CONSTRUCTION EQUIPMENT DURING INSTALLATION TO PROTECT THE CHAMBER FROM DAMAGE DUE TO POINT AND IMPACT LOADING. BACKFILL THE CHAMBER WITH MDOT 6A CRUSHED STONE. UPON INSTALLTION, THE CHAMBER SHALL BE FILLED WITH WATER TO THE OUTLET ELEVATION. ONCE THE CHAMBER IS INSTALLED, PLACE AN ORANGE SAFETY FENCE 4–5 FT HIGH WITH TEE POSTS AROUND THE CHAMBER. PLACE FENCE MIN. 3 FT BEYOND THE PUMP CHAMBER EXCAVATION AREA. ANY DAMAGE TO THE SYSTEM AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS AND BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THE REPAIR COST. IF GIVEN IN WRITING, A 3–4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE AVAILABLE ON SITE DURING THE INSTALLATION.

DESIGN BY: AG / RK	REV: DATE: 8-27-19	1 OF 1	KSI
MANUF. APPROVAL BY: -	SCALE: NTS	SHEET NO.	
DRAWING NO. PC INSTALL			

KENNEDY SOLUTIONS, INC.
2111 Sage Lake Road
Prescott, MI 48756
Ph: 800-499-4046
Fx: 248-375-8144

HAMPTON MANOR OF VAN BUREN TOWNSHIP PROPOSED STORM SEWER PUMP STATION

BASIS OF DESIGN

DRAIN POND IN 40 HOURS							POND HIGH WATER	PUMP OFF	PUMP ON	OUTLET PIPE SIZE (IN)	OUTLET INV.	C.L. OUTLET
	69239.55	C.F.	x 7.48 GAL/FT.	=	517911.85	GAL/DAY	677.99	673.00	675.00	4	678.50	678.67
	517911.85	GAL/DAY	/2400 (40 HOURS)	=	216	GPM						
HEAD LOSS - 4" Force Main			(TOTAL)									
DYNAMIC HEAD			QUANTITIY	EQUIV. LENGTH			EQUIV. LENGTH					
4" PIPE		=	346	346	FT							
90° BEND (4")		=	3	33.3	FT		10.10					
4" CHECK VALVE		=	1	33.6	FT		33.6					
4" VALVE		=	1	2.7	FT		2.7					
4" TEE		=	1	22	FT		22.0					
22 1/2° BEND, VERTICAL (4")		=	2	6	FT		3.0					
TOTAL LENGTH				446.6	FT							
HEAD LOSS PER 100 FT		=	4.47	FT								
DYNAMIC HEAD		=	19.69	FT								
STATIC HEAD												
MINIMUM(CL OUTLET-HIGH WATER)		=	0.68	FT								
MAXIMUM(CL OUTLET-PUMP OFF)			5.67	FT								
TOTAL DYNAMIC HEAD												
MINIMUM		=	20.37	FT								
MAXIMUM		=	25.36	FT								
ACTUAL PUMP OUTFLOW		=	**201**	GPM	@	25.6	ft/head					
(Zoeller 6123) (Qpump)		=	**0.4479**	cfs								

SYSTEM FRICTION LOSSES		
FLOW	4"HL/100	DYNAMIC HL
100	1.23	5.42
150	2.61	11.50
200	4.43	19.52
250	6.71	29.56
300	9.38	41.33

SYSTEM CURVE DATA				
	ELEVATION	STATIC HEAD	TDH	FLOW
HIGH WATER	677.99	0.68	25.6	200
	677.00	1.67	24.0	195
	676.00	2.67	23.5	190
	675.00	3.67	23.0	185
	674.00	4.67	22.5	180
NORMAL WATER/PUMP OFF	673.00	5.67	21.5	175

POND DEWATER TIME (40 HOURS)						
VOLUME x 7.48 = GAL. PER DAY						
GAL. PER DAY/60 = GPM						
GPM/FLOW = TIME						
ELEVATION	VOLUME	FLOW	TIME(MIN)			
678.00						
	19644.51	200	12.25			
677.00						
	16560.15	195	10.59			
676.00						
	13716.99	190	9.00			
675.00						
	11085.01	185	7.47			
674.00						
	8484.24	180	5.88			
673.00						
		TOTAL	45.18	HOURS		

Qa (allowable)	=	0.9578	cfs	=	0.15*A				
Qa (allowable)(Morton Taylor Road)	=	0.5077	cfs	=	0.103*frontage/100				
Qa (allowable)(Tyler Road)	=	0.5026	cfs	=	0.103*frontage/100				
Qa (Van Buren Twp.)	=	0.6385	cfs	=	0.10*A				
Qa (Pumped)	=	0.4479	cfs	=	Pump Outflow				
Qa (use smaller value)	=	**0.4479**	cfs						

DUPLEX PUMP STATION NOTES:
ONE PUMP SHALL HAVE THE CAPACITY REQUIRED TO DISCHARGE THE ALLOWABLE OUTFLOW SHOWN IN PUMP CALCULATIONS AND AN ALTERNATOR SHALL BE PROVIDED TO ALTERNATE PUMPS EVERY OTHER CYCLE.

WAYNE COUNTY R19–949 PLAN REVIEW

Revisions:
09–16–20 REV PER WCDPS L.A.
04–01–21 REV PER WCDPS L.A.
05–19–21 REV PER OHM FOR WCDPS L.A.

Client:
SYED IMRAN LAND HOLDING LLC ZOHAIB SYED 1451 S. GRATIOT AVENUE CLINTON TOWNSHIP, MI 48035 989–708–1878 zohaibsyed2001@yahoo.com

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

HAMPTON MANOR
OF VAN BUREN TOWNSHIP
PUMP STATION

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

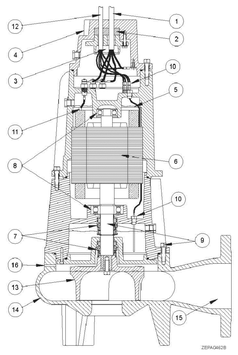
Scale:	NO SCALE
Paper Size:	24"x36"
Date:	11–06–19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19–249
Sheet No.	15

Submersible Wastewater Pump Association SWPA MEMBER

61 HD SERIES
PRODUCT FEATURES
3" & 4" Flanged Horizontal Discharge Units

QUALITY ENGINEERED

Covered by US Patent Number 6,364,620



APPLICATIONS
- Engineered Lift Stations
- Storm Water Removal
- Wastewater Transfer
- Industrial Wastewater

SPECIFICATIONS

PUMP:
- Solids - 2½" spherical capability
- Discharge Size – 3" & 4" Flanged horizontal
- Seals - dual mechanical carbon/rotary ceramic/stationary, Buna-N elastomers
- Construction - Cast Iron ASTM A-48, Class 30, 30,000# tensile strength, protected with a corrosion resistant baked on epoxy powder coating
- Balanced concentric pump housing and impeller
- Attaching Hardware - 304 stainless steel
- O-ring Seals: Buna-N
- Ductile Iron Impeller - 2 blade semi-open with top pump out vanes
- Optional:
  - ☐ Thermal sensor and moisture detection system
  - ☐ Trimmed Impeller
  - ☐ Vortex Impeller
  - ☐ Bronze Impeller
  - ☐ 3" solids capacity (4" discharge units only)
  - ☐ Silicon carbide seal(s)
  - ☐ Viton O-ring Elastomers
  - ☐ Additional cord length ____ ft.
  - ☐ 3450 RPM High Head units (3" discharge units only)
  - ☐ Dry pit configuration (1 thru 3 BHP only -not CSA listed)
  - ☐ High Temperature Construction (not CSA listed)
  - ☐ Inverter Duty Motor (not CSA listed)
  - ☐ Rail Systems

Listed to UL778 and CSA22.2 108 Standards

MOTOR:
- 1 Phase - 230 Volt, 1750 RPM
- 3 Phase - 200/230/460/575 Volt, 1750 RPM
- Stator - Class F insulation and lead wires NEMA B design
- Housing - Cast Iron, oil-filled
- Ball Bearings - Dual high carbon chromium steel
- Power Cable Length - 25'

FEATURES:
1. 25' of heavy duty power cable
2. Protected cable entrance. The compression grommet allows for field replacement of the cable.
3. Each conductor is individually sealed to eliminate cord wicking of liquids.
4. Lifting lug integral part of housing
5. Oil-filled motor housing assures uniform heat distribution, lubricates bearings, and conducts heat for cooler running.
6. Heavy duty motor features ball bearing construction. Class F motor insulation is double dipped and baked. End connections and lead wires are Class F. At maximum load, winding temperature will not exceed 250°F with motor housing not submerged.
7. Tandem seals, Carbon/rotating, ceramic/stationary, Buna-N elastomers
8. Upper and lower high carbon chromium steel ball bearings
9. Stainless steel shaft and hardware resists corrosion
10. Optional: Patented moisture detection system with upper and lower probes, protecting the motor from liquid entry.
11. Optional: Thermal sensor protection. Motors have 2 normally closed temperature sensors imbedded in windings.
12. Optional: 25' sensor cable
13. Balanced Ductile Iron 2 vanes semi-open impeller with top pump out vanes for seal protection. Keyed and bolted to shaft
14. Concentric case reduces radial loading for longer bearing and seal life.
15. 3" or 4" flanged horizontal discharge
16. Vent hole helps prevent air locking
17. Unit protected with corrosion resistant baked on epoxy powder coating.

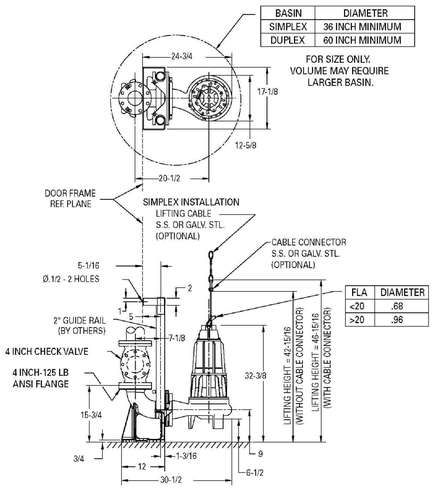
For additional information on 61 HD Series pumps, refer to catalog on Technical Data ZM1750; Performance Data ZM1744, ZM1752, ZM1753; Dimensional Data ZM1756, ZM1757, ZM1758, ZM1759; Guide Specifications ZM1743; Replacement Parts ZM1760; and Owners Manual ZM1759.

For information on additional Zoeller products refer to catalog on Rail Systems, ZM1347, Control Panels, ZM1342, Float Switches and J-Boxes, ZM1536; Float Switch Brackets, ZM1328; Pump Lifting Cables, ZM1328; Check Valves and Piping Accessories, ZM1348.

© Copyright 2011 Zoeller Co. All rights reserved.

RAIL SYSTEM DIMENSIONAL DATA, continued

4" FLANGED HORIZONTAL DISCHARGE
P/N 39-0154 RAIL SYSTEM



BASIN	DIAMETER
SIMPLEX	36 INCH MINIMUM
DUPLEX	60 INCH MINIMUM

FOR SIZE ONLY. VOLUME MAY REQUIRE LARGER BASIN.

FLA	DIAMETER
<20	.68
>20	.96

© Copyright 2018 Zoeller® Co. All rights reserved.
502-778-2731 | 800-928-7887 | 3649 Cane Run Road | Louisville, KY 40211-1961 | zoeller.com

Pump Data Sheet - Zoeller Engineered Products

Company: Kennedy Solutions Inc.
Name: Alicia
Date: 04/05/2021

ZOELLER ENGINEERED PRODUCTS

Pump:
Size: 1-5 HP, 3" or 4" FLG DC
Type: 61 HD-1 Phase
Synch Speed: 1800 rpm
Dia: 6 in
Solids Capacity: 2.5"
Motor Type: STD
Dimensions: Suction: 2.62 in Discharge: —

Search Criteria:
Flow: 198 US gpm
Head: 25 ft
Near Miss: —
Static Head: 5 ft

Pump Selection Warnings:
None

Fluid:
Name: Water
SG: 1
Density: 62.4 lb/ft³
Viscosity: 1.1 cP
Temperature: 60 °F
Vapor Pressure: 0.256 psi a
Atm Pressure: 14.7 psi a
Margin Ratio: 1

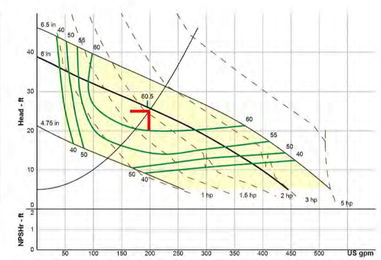
Pump Limits:
Temperature: —
Wkg Pressure: —
Sphere Size: 2.5 in

Motor:
Standard: NEMA
Enclosure: TEFC
Frame: 182T
Sizing Criteria: Max Power on Design Curve
Min Motor Power: 1 hp
Max Motor Power: 5 hp
Size: 3 hp
Speed: 1800 rpm

--- Duty Point ---
Flow: 201 US gpm
Head: 25.6 ft
Eff: 60.5%
Power: 2.14 hp
NPSHr: —
Speed: 1750 rpm

--- Design Curve ---
Shutoff Head: 38.9 ft
Shutoff dP: 16.8 psi
Min Flow: — US gpm
BEP: 60.5% @ 195 US gpm
NOL Power: 2.99 hp @ 445 US gpm

--- Max Curve ---
Max Power: 5.01 hp @ 520 US gpm



Models 6120 thru 6124, Semi-open impeller. 3 or 4 in Flanged Discharge. Refer to tech data sheet for verification of voltage compatibility.

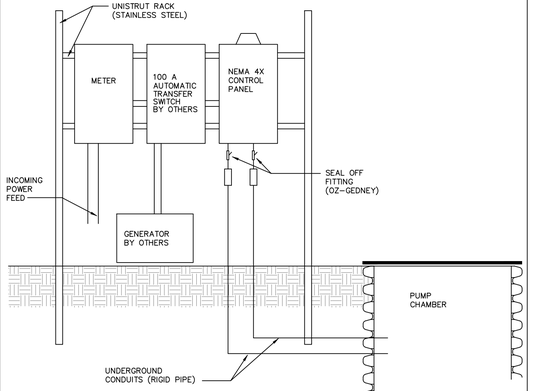
Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr
238	1750	23.1	60.2	2.25	—
198	1750	25.6	60.5	2.13	—
158	1750	28.4	60.3	1.81	—
119	1750	30.8	60.1	1.48	—
79.2	1750	33.3	56.6	1.17	—

Selected from catalog: Zoeller Solids Handling Pumps.60, Vers 1.2.3

F:\19\19-249\Drafting & Engineering\Engineering\19-249-13-16-Pond-Pump.dwg, 15-Pump, 5/19/2021 8:41:11 AM, laura.ambros

KSI STANDARD PUMP CHAMBER AT GRADE COMPONENTS



CONTOL PANEL SHALL HAVE AN ALTERNATOR THAT ALTERNATES PUMPS EVERY OTHER CYCLE. SECOND PUMP WILL ONLY TURN ON AT SPECIFIED ELEVATION IF FIRST PUMP FAILS. (ONLY ONE PUMP SHALL RUN AT ANY GIVE TIME.

DESIGN BY: AG / RK	REVISED: 9-6-18 DATE: 12-1-09	1 OF 1	KSI
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.	
DRAWING NO. UNISTRUCT RACK DETAIL			

KENNEDY SOLUTIONS, INC.
2111 Sage Lake Road
Prescott, MI 48756
Ph: 800-699-4046
Fx: 248-375-8144

Your Peace of Mind is Our Top Priority®

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP COMPANY
Zoeller Family of Water Solutions™
MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

visit our web site:
www.zoeller.com

SECTION: 22.10.110
ZM1756
1111
Supersedes
0211

Submersible Wastewater Pump Association — Approved Curve and Data Format

Patent No. 6,364,620

61 HD SERIES
TECHNICAL DATA
1-7.5 BHP / 1750 RPM

Tested to UL778 and CSA22.2 108 Standards

MODEL NUMBER:	☐ 6120	☐ 6121	☐ 6122	☐ 6123	☐ 6124	☐ 6125
PUMP NAME PLATE HORSEPOWER: BHP	1.0	1.5	2.0	3.0	5.0	7.5
SERVICE FACTOR:	1.2	1.2	1.2	1.2	1.2	1.0
NEC LOCKED ROTOR CODE:	M	J	K	F	E	C
MAXIMUM KW INPUT:	1.4	1.9	2.4	3.5	5.5	6.9
3 PHASE IMPELLER DIA.: in (mm) STANDARD	4 7/8" (124 mm)	5 3/8" (137 mm)	5 3/4" (146 mm)	6 3/8" (162 mm)	7" (178 mm)	7 ¼" (191 mm)
DISCHARGE SIZE:	☐ 3" NPT Vertical	☐ 3" Horizontal Flange	☐ 4" Horizontal Flange			

SOLID SIZE: in (mm)	2 ½"(64 mm) OPTIONAL ☐ 3"(76 mm)	TANDEM SEALS:	Standard
IMPELLER TYPE:	Ductile iron Semi-open OPTIONAL ☐ Ductile iron Vortex ☐ Bronze Semi-open	MOTOR DESIGN LETTER:	NEMA B
FLANGE:	ANSI B16.1	POWER CORD LENGTH: ft (m)	25' (7.6 m) ☐ _____*
PUMP NET WEIGHT: lbs. (kg)	245 lbs. (111kg)	POWER CORD:	#12-4 SO*
MOTOR SHAFT	416 SS	STATOR & LEAD WIRES INSULATION:	Class F
RPM:	1750	MAXIMUM STATOR TEMPERATURE:	311°F (155°C)
MOTOR TYPE:	Standard Submersible	**DRY PIT (1-3 BHP, INTERMITTENT DUTY)	☐
	☐**** Inverter Duty Submersible (1-5 BHP ONLY)	**HIGH TEMP (1-3 BHP ONLY)	☐ (175°F Max.)

SHAFT SEAL CONSTRUCTION:	STANDARD	CARBON/CERAMIC
	OPTIONAL UPPER	☐ CARBON/SILICON CARBIDE ☐ SILICON CARBIDE/SILICON CARBIDE
	OPTIONAL LOWER	☐ CARBON/SILICON CARBIDE ☐ SILICON CARBIDE/SILICON CARBIDE
O-RING ELASTOMERS	STANDARD	BUNA-N
	OPTIONAL	☐ VITON
☐ OPTIONAL SENSING DEVICES***	MOTOR THERMAL SHUTOFF	THERMAL SENSORS WITH AUTOMATIC RESET
	MOISTURE DETECTION	MOISTURE SENSING PROBES
IMPELLER TRIM:	OPTIONAL	☐ DESIGN POINT ____ GPM @ ____' TDH, IMPELLER DIA. ____"
RECOMMENDED FLUID LEVEL FOR CONTINUOUS OPERATIONS: in (m)		24" (0.6m) (For Continuous Duty, Refer to Warranty)
MAXIMUM WATER TEMPERATURE FOR CONTINUOUS OPERATION:		104°F (40°C)

* Models with a FLA greater than 20 amps use #6-4 gauge power cord.
** 1-3 BHP Only. Contact factory. These configurations are not CSA listed.
*** Requires a circuit in control panel to function.
**** 30-60 Hz, NEMA MG-1, Part 30, not CSA listed

MODEL	BHP	SERVICE FACTOR	☐ 230V / 1 PHASE		☐ 200V / 3 PHASE		☐ 230V / 3 PHASE		☐ 460V / 3 PHASE		☐ 575V / 3 PHASE	
			FLA	LRA	FLA	LRA	FLA	LRA	FLA	LRA	FLA	LRA
6120	1	1.2	6.9	48.0	4.3	32.6	3.7	28.0	1.9	14.0	1.6	11.5
6121	1.5	1.2	8.9	48.0	5.9	32.6	5.1	28.0	2.6	14.0	2.0	11.5
6122	2	1.2	14.5	86.0	7.8	46.0	6.8	41.0	3.4	20.5	2.7	16.2
6123	3	1.2	17.0	86.0	11.0	46.0	9.6	41.0	4.8	20.5	3.9	16.2
6124	5	1.2	28.0	139.0	17.5	64.0	15.2	58.0	7.6	29.0	6.1	23.0
6125	7.5	1.0	--	--	25.3	93.0	22.0	72.0	11.0	36.0	9.0	29.0

© Copyright 2011 Zoeller Co. All rights reserved.

Trusted. Tested. Tough.™

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP COMPANY
MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
TEL: (502) 778-2731 • 1 (800) 928-PUMP • FAX: (502) 774-3624

Visit our web site:
zoellerpumps.com

SECTION: 2.50.040
FM0486
0717
Supersedes
0414

ELECTRICAL ALTERNATOR CONTROL PANEL - FOR DUPLEX INSTALLATIONS

An Electrical Alternator is used on a Duplex pump application where automatic alternation of the pumps is desired for added protection in residential or commercial applications. With one pump operating to handle normal flow, a second pump becomes operational in the event the water level continues to rise. The built-in alarm system, a standard feature, can be connected to sound when the second pump becomes operational (3-float switch system) or independently (4-float switch system). All electrical systems must be installed by a qualified electrician and according to the National Electrical Code. (See Section 430-71 though 430-113, plus any others that apply.)

Control Panel Features:

- Hand-Off-Auto Toggle Switch for each pump
- Green pump run pilot light for each pump
- Alarm test and silence switches
- Red pilot light (Nema 1 Only) and audible alarm with 83 to 85 decibel rating for a high water condition
- Red Alarm Beacon included with Nemas 4X enclosure
- Auxiliary Dry Contact
- High Water Alarm
- On Single Phase - Circuit breaker for each pump
- On Three Phase - Motor protective switch with overload protection
- Magnetic starter for each pump
- Alternating mechanism
- Numbered terminal strip for connecting pumps and variable level float switches
- Nema 1 - general purpose or Nema 4X - Waterlight enclosures available
- Integral auxiliary terminal board connections (dry contact) for remote alarm devices
- 3 or 4 variable level float switch control operation
- Three 20' float switches included with single phase panels
- 2 Year Warranty
- The use of off-the-shelf components provide for relatively easy field maintenance and repair
- Float switches not included with three phase panels (See FM0526)

NEMA 1 ENCLOSURE

10-0092

NEMA 4X ENCLOSURE

10-0093

Products may not be exactly as illustrated

CONTROL PANEL USED WITH SINGLE PHASE PUMPS

NEMA 1 ENCLOSURE WITH 20' FLOAT SWITCH

Item No.	Dimensions H x W x D	Volts	Amp Range
10-1039	12" x 10" x 6"	115	7-15
10-1040	12" x 10" x 6"	115	15-20
10-0092	12" x 10" x 6"	115/200/230	0-20

NEMA 4X ENCLOSURE WITH 20' FLOAT SWITCH

Item No.	Dimensions H x W x D	Volts	Amp Range
10-1041	12" x 10" x 8"	115	7-15
10-1042	12" x 10" x 8"	115	15-20
10-1043	12" x 10" x 8"	115/200/230	0-7
10-1044	12" x 10" x 8"	115/200/230	7-15
10-1045	12" x 10" x 8"	115/200/230	15-20
10-1046	12" x 10" x 8"	115/200/230	20-30
10-0093	12" x 10" x 8"	115/200/230	0-20

** Branch circuit protection provided by installing electrician.*

NOTE: 600 and X600 Series single phase pumps require special panels that include start components. See Selection Guide FM0712 for correct panel selection.
NOTE: All variable level float switches in this section are mechanically activated and do not contain mercury.

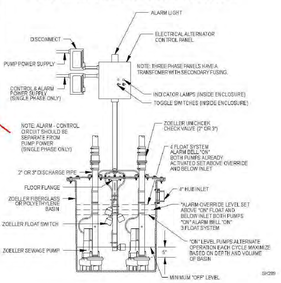
© Copyright 2017 Zoeller® Co. All rights reserved.

NEMA 4X ENCLOSURE (Float Switches not included)

Order No.	Dimensions H x W x D	Volts*	Amp Range
10-1102	14" x 12" x 6"	200/230/460	1.0 - 1.6
10-1104	14" x 12" x 6"	200/230/460	1.6 - 2.5
10-1106	14" x 12" x 6"	200/230/460	2.5 - 4.0
10-1108	14" x 12" x 6"	200/230/460	4.0 - 6.3
10-1110	14" x 12" x 6"	200/230/460	6.0 - 10.0
10-1111	14" x 12" x 6"	200/230/460	9.0 - 14.0
10-1112	14" x 12" x 6"	200/230/460	13.0 - 18.0
10-1114	14" x 12" x 6"	200/230/460	17.0 - 23.0
10-1115	14" x 12" x 6"	200/230/460	20.0 - 25.0
10-1183	14" x 12" x 6"	200-208	30.0 - 32.0
10-1154	14" x 12" x 6"	575	1.6 - 2.5
10-1156	14" x 12" x 6"	575	2.5 - 4.0
10-1158	14" x 12" x 6"	575	4.0 - 6.3

**Three phase panel has multi-tap transformer with secondary fusing.*

DUPLEX ELECTRICAL ALTERNATING SYSTEM



Sequence of Operation for Duplex Panel

1. Operation can begin after the following:
   - Correct voltage is supplied to Panel
   - Panel is properly grounded
   - Pumps are connected correctly to Panel
   - Panel Circuit Breakers are closed
   - Floats are installed properly
   - Overload Protection is adjusted to Pump nameplate amps
   - Pump HOA Switches are set to "Auto"
   - Control On/Off Switch is set to "On"
2. When the "Stop" and "Lead" floats are closed Pump 1 will energize and the Pump 1 Pump Run Light will illuminate. Pump 1 will remain operational until the "Stop" float opens.
3. The next time the "Stop" and "Lead" floats are closed the Alternating Circuit will energize Pump 2 and the Pump 2 Pump Run Light will illuminate. Pump 2 will remain operational until the "Stop" float opens. This cycle will repeat each time the fluid level rises and falls.
4. If the fluid level continues to rise after the first pump has been energized the "Lag" float will close. When the "Lag" float has closed the second Pump will Energize. Both Pumps will remain operational until the "Stop" float opens.
5. In a three float system when the "Lag" float is closed the following will also occur:
   - The External High Water Light will illuminate
   - The Audible High Water Horn will sound
   - The Auxiliary Dry Contacts will close
6. In a four float system, the alarm float should be the third float causing an alarm to sound when the lead pump fails to operate or the rate of in flow into the basin exceeds the capacity of one pump. When the alarm float is closed the following will occur.
   - The External High Water Light will illuminate
   - The Audible High Water Alarm will sound
   - The Auxiliary Dry Contacts will close
   As the liquid level continues to rise the fourth float will close, energizing the lag pump. The lag pump and the lead pump will remain energized until the "Stop" float opens.
   NOTE: In Duplex systems where it is considered normal for two pumps to operate in tandem during peak flow conditions, the third and fourth float may be reversed.
7. The Audible High Water Horn can be silenced by pressing the Alarm Silence Button. When the "Alarm" float opens the External High Water Light, Audible High Water Horn and Dry Auxiliary Contacts will be reset.

⚠ WARNING All electrical systems must be installed by a qualified licensed electrician and according to the National Electrical Code. (See section 430-71 through 430-113 plus any others that apply)

Refer to FM0712 for correct selection of Electrical Alternator.

© Copyright 2017 Zoeller® Co. All rights reserved.

KSI Pump Chamber Floatation Resistance Calculations

There are many factors involved in resisting the floatation forces of a buried KSI Pump Chamber. Each of the following are involved in holding the pump chamber in place.

1. The weight of all the parts of the pump, pump chamber and pump lid.
2. The inlet and outlet of the pump chamber must break away before the chamber could rise up.
3. The friction between the chamber shell and the surrounding backfill also acts to hold the chamber in place.
4. The rings spread the load to a much larger volume of soil. In the same way that loads transferred down into the soil spread out, a load transmitted to the backfill by the rings spreads out. This results in a conical shaped section of soil resting on each ring. The angle of the cone is based on the type of backfill used. In general, any Class I or II backfill will result in an angle of repose of 25-35 degrees. Conservative engineering practice normally dictates the use of an angle of repose at 16 degrees. This is very conservative, unless flowing soils, such as quicksand or flowing silts, are used as backfill. In general, any soil which can be compacted will have an angle of repose of greater than 16 degrees.

The following demonstrates how each of the forces acts to hold the pump chamber in place.

Example

An 12'-6" high KSI Pump Chamber is installed and backfilled with MDOT 6A crushed stone. Although it is unlikely, we will assume a groundwater table up to the top of the lid and assume that the chamber is empty.

Volume of the Chamber

The Chamber will be constructed using 60" ID/66" OD SLCPP HDPE pipe with fully welded bottom and stubs. The overall height will be 12'-6".

$V = \pi r^2 h$ r = radius and h = height r = 2.75 ft. h = 12.5'

$V = \pi(2.75)212.5$ V = 296.98 cubic feet

Assuming ground water up to the top of the chamber lid, the total uplift or floatation force on the chamber is Volume of Chamber X Weight of Water

Total Uplift Force = 296.98 CF x 62.4 lbs./CF Total Uplift Force = 18,531 lbs.

The forces and weights which resist this floatation force are as follows:

1. Weight of complete pump chamber

Steel lid	350 lbs
HDPE shell	500 lbs
Rail System	40 lbs
Pump & accessories	600 lbs

Total weight of complete pump chamber is 1490 lbs.

2. We will not be taking into account the shear force at the inlet and outlet.

Although this force could be several thousand pounds, it is dependent on type and size of pipe used.

3. The frictional resistance between the chamber and the backfill material also are highly variable and is not included in this analysis.

4. The volume of the soil in the conical shaped section which resists the movement of the chamber can be calculated as follows:

Assuming a conservative 16 degree angle of repose.

Volume of Full Conical Section (see fig. 1)

$Vf = \frac{\pi r^2 h}{3}$

need to solve for the radius

$\tan 16° = \frac{r1}{h}$

$r1 = \tan 16° \cdot h$ h= height and x = portion of radius

$r1 = \tan 16° \times 12.5' = 3.584$

add additional radius (radius of chamber) $r = 3.584 + 2.75 = 6.33'$

solve for overall depth of conical section (h1)

$\tan 16° = \frac{r}{h1}$ $h1 = 6.33' \div \tan 16°$ $h1 = 22.09'$

$Vf = \frac{\pi r^2 h}{3}$ $Vf = \frac{\pi(6.33')2(22.09')}{3} = 927\ cf$

Volume of bottom portion of conical section need to solve for the height (h2)

$\tan 16° = \frac{r}{h2}$

$h2 = r \div \tan 16°$ h2 = height and r = radius

$h2 = 2.75 \div \tan 16° = 9.59$

$Vp = \frac{\pi r^2 h}{3}$ $Vp = \frac{\pi(2.75)2(9.59)}{3} = 75.95\ cf$

Volume of Chamber = 296.98 cf

Total volume of soil bearing on pump chamber

927 cf – 75.95 cf – 296.98 cf = 554.07 cf

Weight of soil = 100 lbs/cf (conservative number)

Total weight of soil bearing on pump chamber

554.07 cf x 100 lbs/cf = 55,407 lbs

Total weight of complete pump chamber + weight of soil = Downward force

1490 lbs. + 55,407 lbs. = 56,897 lbs.

Downward force must be greater than uplift force.

56,897 lbs. > 18,531 lbs. SF = 3.07

KSI Pump Chamber will not float even when assuming that groundwater is at the top of the lid.

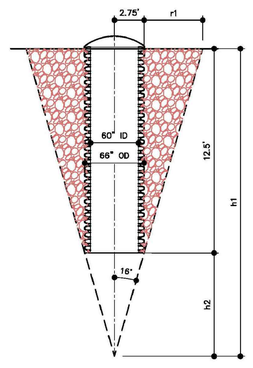


FIGURE 1

DESIGN BY: AG	DATE: 9-16-20		KSI
MANUF. APPROVAL BY:	SCALE:	SHEET NO.	
DRAWING NO. STRUCTURE FIGURE			

KENNEDY SOLUTIONS, INC.
2111 Sage Lake Road
Prescott, MI 48756
Ph: 800-699-4046
Fx: 248-375-8144

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:	
09-16-20 REV PER WCDPS	L.A.
04-01-21 REV PER WCDPS	L.A.
05-19-21 REV PER OHM FOR WCDPS	L.A.
Client:	
SYED IMRAN LAND HOLDING LLC ZOHAIB SYED 1451 S. GRATIOT AVENUE CLINTON TOWNSHIP, MI 48035 989-708-1878 zohaibsyed2001@yahoo.com	

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

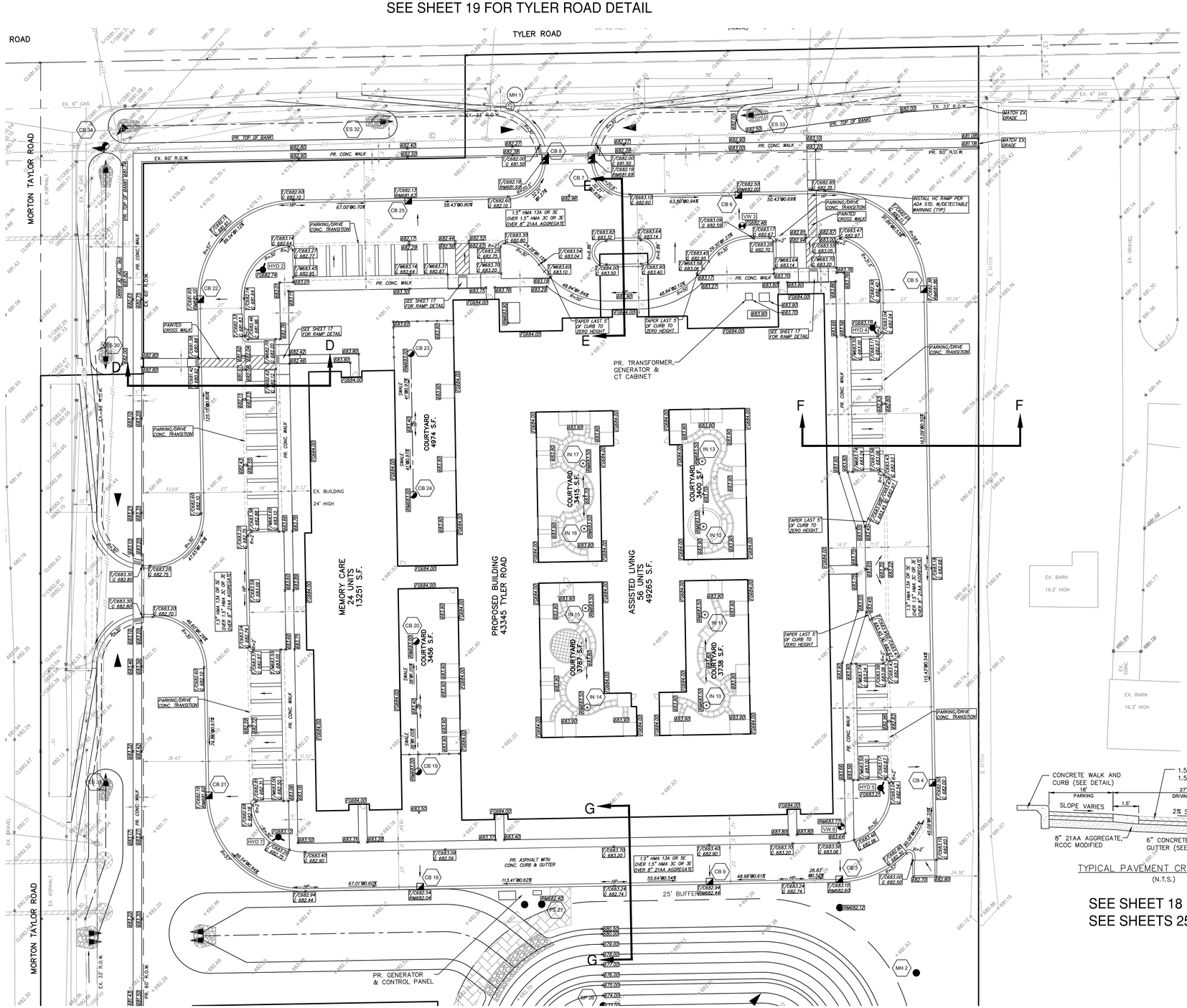
HAMPTON MANOR OF VAN BUREN TOWNSHIP PUMP STATION

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	NO SCALE
Paper Size:	24"x36"
Date:	11-06-19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19-249
Sheet No.	16

F:\19\19-249\Drafting & Engineering\Engineering\19-249-13-16-Pond-Pump.dwg, 16-Pump, 5/19/2021 8:43:14 AM, laura.ambros

SEE SHEET 19 FOR TYLER ROAD DETAIL



ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

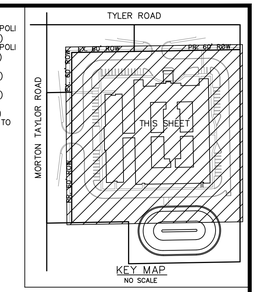
THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

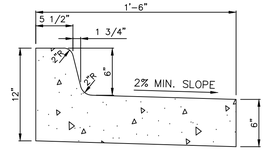
811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLI ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLI ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

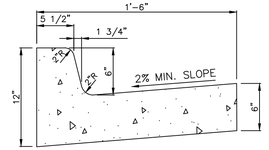
SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM



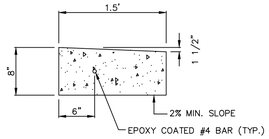
KEY MAP
NO SCALE



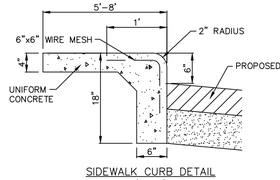
6" CONCRETE CURB DETAIL REVERSE GUTTER PAN
(N.T.S.)



6" CONCRETE CURB & GUTTER DETAIL
(N.T.S.)

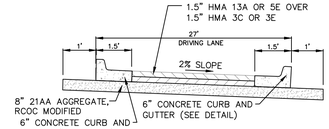


PARKING/DRIVE TRANSITION
(N.T.S.)



SIDEWALK CURB DETAIL
(N.T.S.)

TYPICAL PAVEMENT CROSS-SECTION
(N.T.S.)



TYPICAL PAVEMENT CROSS-SECTION
(N.T.S.)

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG UG UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG UG UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

SEE SHEET 18 FOR HC RAMP DETAILS AND CROSS SECTIONS
SEE SHEETS 25-29 FOR WCDPS STANDARD NOTES AND DETAILS

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1" = 30'

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

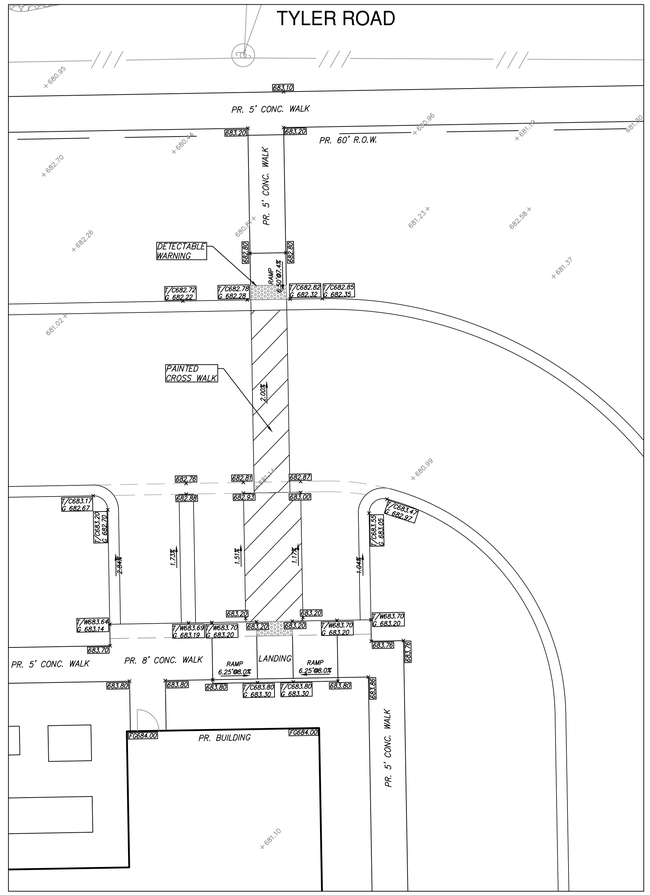
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP PAVING AND GRADING PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

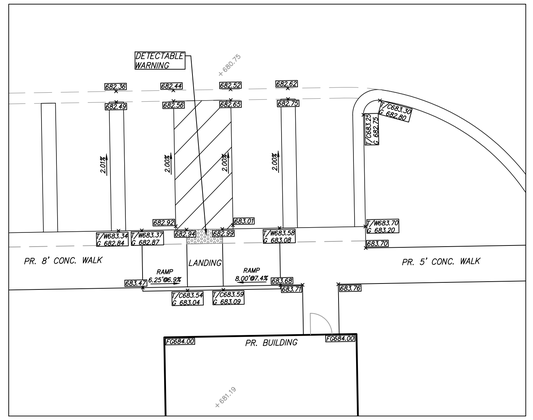
Scale: 1"=30'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No.: 17

F:\19\19-249\Drafting & Engineering\Engineering\19-249-17-24-Grading.dwg, 17-Grading, 5/19/2021 9:10:02 AM, laura.ambros



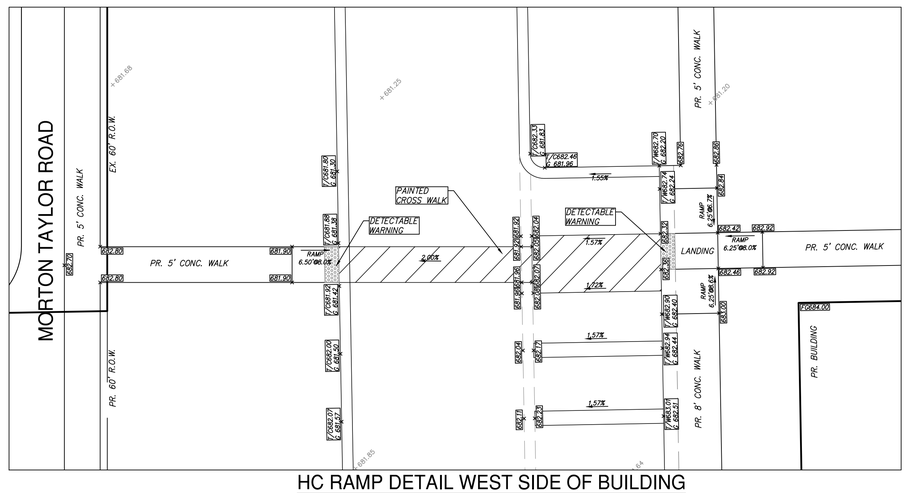
HC RAMP DETAIL NORTH SIDE OF BUILDING - EAST

SCALE: 1"=10'



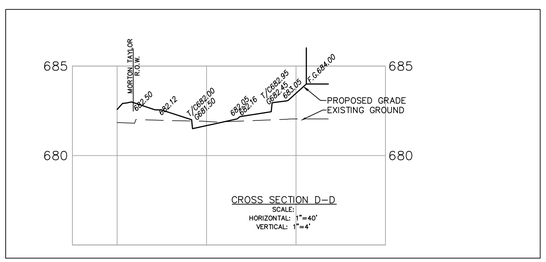
HC RAMP DETAIL NORTH SIDE OF BUILDING - WEST

SCALE: 1"=10'



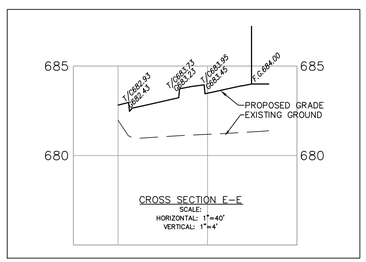
HC RAMP DETAIL WEST SIDE OF BUILDING

SCALE: 1"=10'



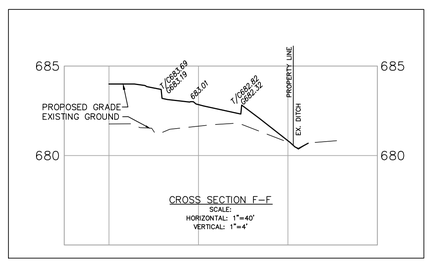
CROSS SECTION D-D

SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=4'



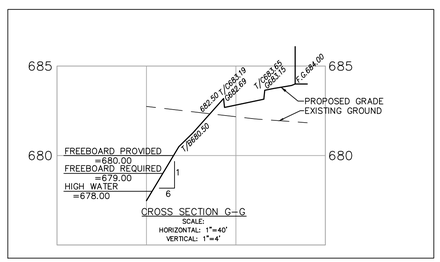
CROSS SECTION E-E

SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=4'



CROSS SECTION F-F

SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=4'



CROSS SECTION G-G

SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=4'

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

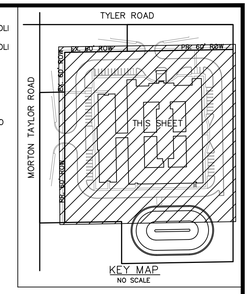
THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLI ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLI ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM



EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG — UG — UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG — UG — UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

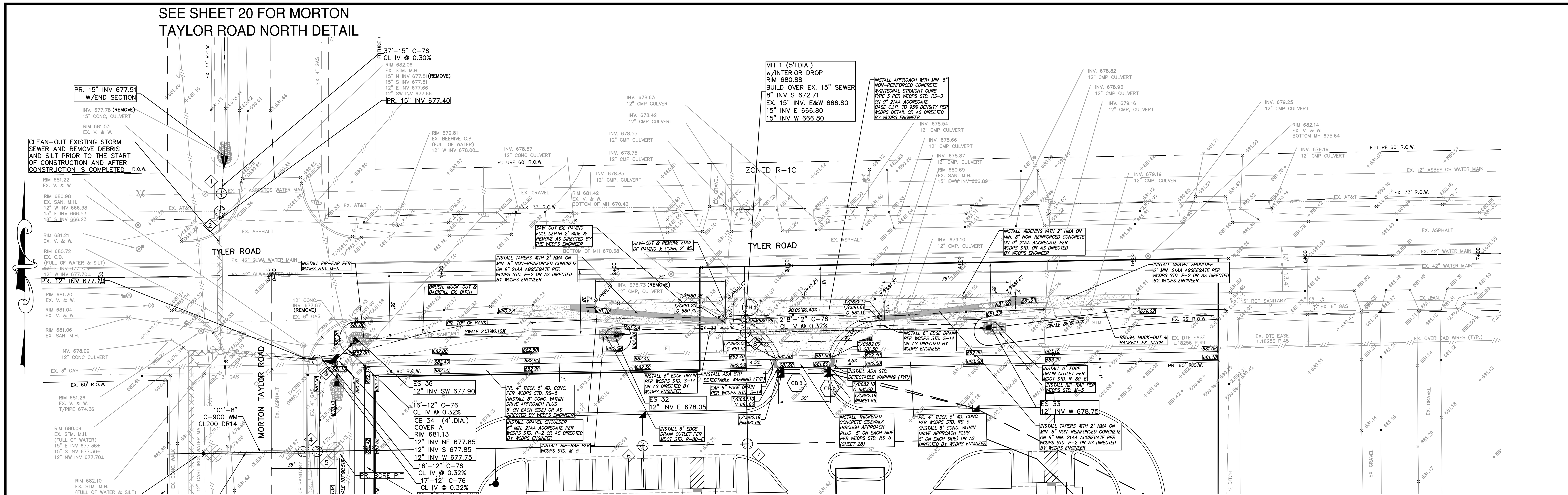
HAMPTON MANOR OF VAN BUREN TOWNSHIP HC RAMP DETAILS AND CROSS SECTIONS

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

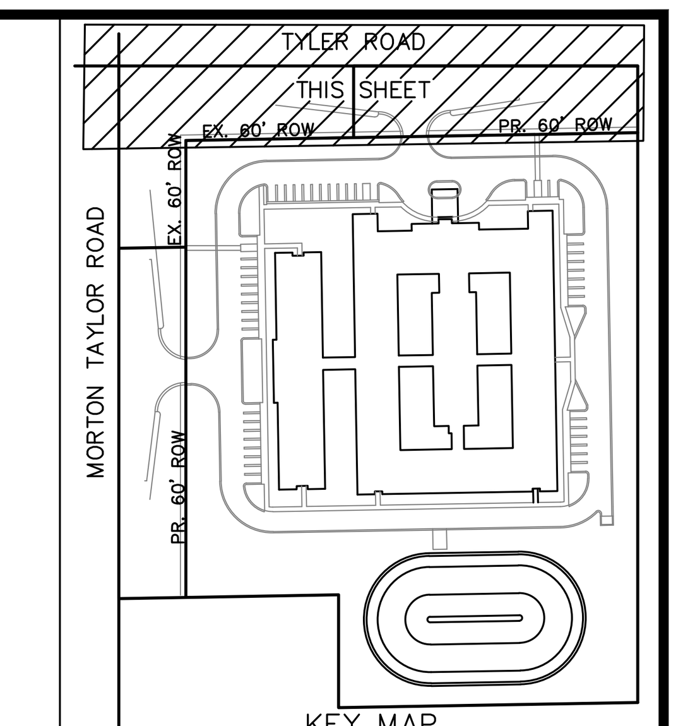
Scale: VARIES
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 18

F:\19\19-249\Drafting & Engineering\Engineering\19-249-17-24-Grading.dwg, 18-Ramp-XSec, 5/19/2021 9:25:14 AM, laura.ambros

SEE SHEET 20 FOR MORTON TAYLOR ROAD NORTH DETAIL



SEE SHEET 21 FOR MORTON TAYLOR ROAD SOUTH DETAIL



KEY MAP
NO SCALE

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

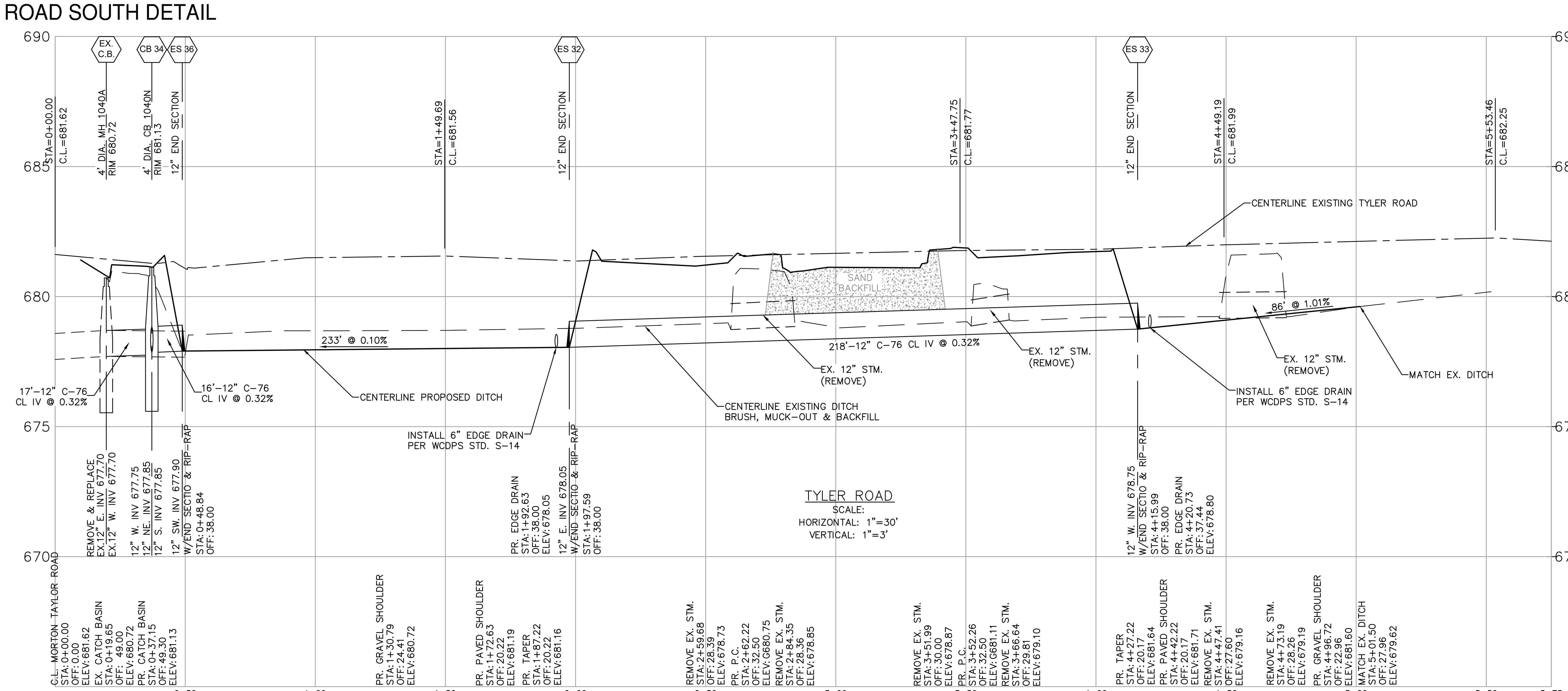
SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811
3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES



Utility Crossings

Crossing #	Sanitary Diameter	Sanitary Top	Sanitary Bottom	Water Main Diameter	Water Main Top	Water Main Bottom	Storm Diameter	Storm Top	Storm Bottom	Ex. Misc. Util. Diameter	Ex. Misc. Util. Top	Ex. Misc. Util. Bottom	Clearance	Lower Water Main	Ground
1				12	676.26	675.26	12	679.09	677.76				0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00	0.00		0.00
3							12	679.63	678.29	4	677.32	676.99	0.97		680.32
4	18	667.80	665.88	8	675.22	674.55							6.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69	2.67		679.02
6				8	674.74	674.07	12	677.57	674.07				1.50	Yes	682.04
7	8	674.19	673.52	8	676.64	675.97							1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97				3.92		680.55
9				8	676.63	675.97	6	678.88	678.13				1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78				1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04				1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96				1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31				1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90	2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40							8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5	2.60		682.06
17	18	667.01	665.09				4	673.90	673.57				6.56		682.06
18				12	675.50	674.50	4	677.92	677.59				2.09		681.50

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES STANDARD NOTES:

1. SEE SHEETS 24-28 FOR WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES STANDARD DETAILS.
2. CONSTRUCT THE PROPOSED TEMPORARY ACCESS DRIVE PER WAYNE COUNTY DETAIL CD-1 OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER AND THE UTILITY COMPANY REPRESENTATIVE.
3. REMOVE EXISTING PAVEMENT, CURB AND GUTTER, DRIVE APPROACHES AND CULVERTS AS SHOWN ON PLANS OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
4. CONSTRUCT DRIVE APPROACHES WITH A MINIMUM 8" NON REINFORCED CONCRETE WITH INTEGRAL STRAIGHT CURB TYPE "3" PER WAYNE COUNTY DETAIL RS-3 OVER 6 INCH MINIMUM OF 21AA AGGREGATE BASE COURSE COMPACTED IN PLACE TO A MINIMUM OF 95% DENSITY OF MAXIMUM UNIT WEIGHT PER WAYNE COUNTY STANDARD DETAIL, D-6, OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
5. CONSTRUCT THE PROPOSED 5' WIDE SIDEWALK PER WAYNE COUNTY STANDARD DETAIL, RS-5. MAINTAIN MAXIMUM 2% TRANSVERSE SLOPE TOWARD THE ROAD. INSTALL MINIMUM 8" THICKENED CONCRETE SIDEWALK (WITHIN DRIVE APPROACH PLUS MINIMUM 5' ON EACH SIDE) AND 4" ANYWHERE ELSE OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
6. CONSTRUCT TAPERS PER WAYNE COUNTY STANDARD DETAIL, P-2, FOR TYPICAL CONCRETE TAPER. THE TAPERS SHALL BE CONSTRUCTED WITH 2" HMA TOP (F) AND 8" NON-REINFORCED CONCRETE. THE WIDENING SHALL BE CONSTRUCTED WITH 2" HMA TOP (F) AND 8" NON-REINFORCED CONCRETE WITH INTEGRAL STRAIGHT CURB/CURB DROP, TYPE 4 OVER 9" 21 AA AGGREGATE BASE COURSE.
7. DRIVE APPROACH SLOPES SHALL NOT EXCEED 6%.
8. RESTORE THE ROAD RIGHT-OF-WAY PER NOTE 7 IN THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES GENERAL NOTES OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
9. STRUCTURE ADJUSTMENTS SHALL BE DETERMINED ON SITE AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
10. REMOVE, REPLACE, AND RESTORE ALL EXISTING TRAFFIC SIGNS THAT ARE AFFECTED BY THIS CONSTRUCTION AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
11. RELOCATE ANY EXISTING UTILITIES THAT ARE IN CONFLICT WITH THE PROPOSED WORK AS DIRECTED BY THE WAYNE COUNTY ENGINEER AND THE UTILITY COMPANY REPRESENTATIVE.
12. PLACE THE PROPOSED UTILITIES UNDER WAYNE COUNTY JURISDICTION PER SEWER TRENCH "A" DETAIL OR SEWER TRENCH "B" DETAIL IN THE WAYNE COUNTY DETAIL S-12 OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
13. MAINTAIN 18 INCH VERTICAL CLEARANCE AND 3 FEET HORIZONTAL CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES.

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1" = 30'

SEE SHEET 25-29 FOR WCDPS STANDARD NOTES AND DETAILS

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
12-03-19 REV PER TWP L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

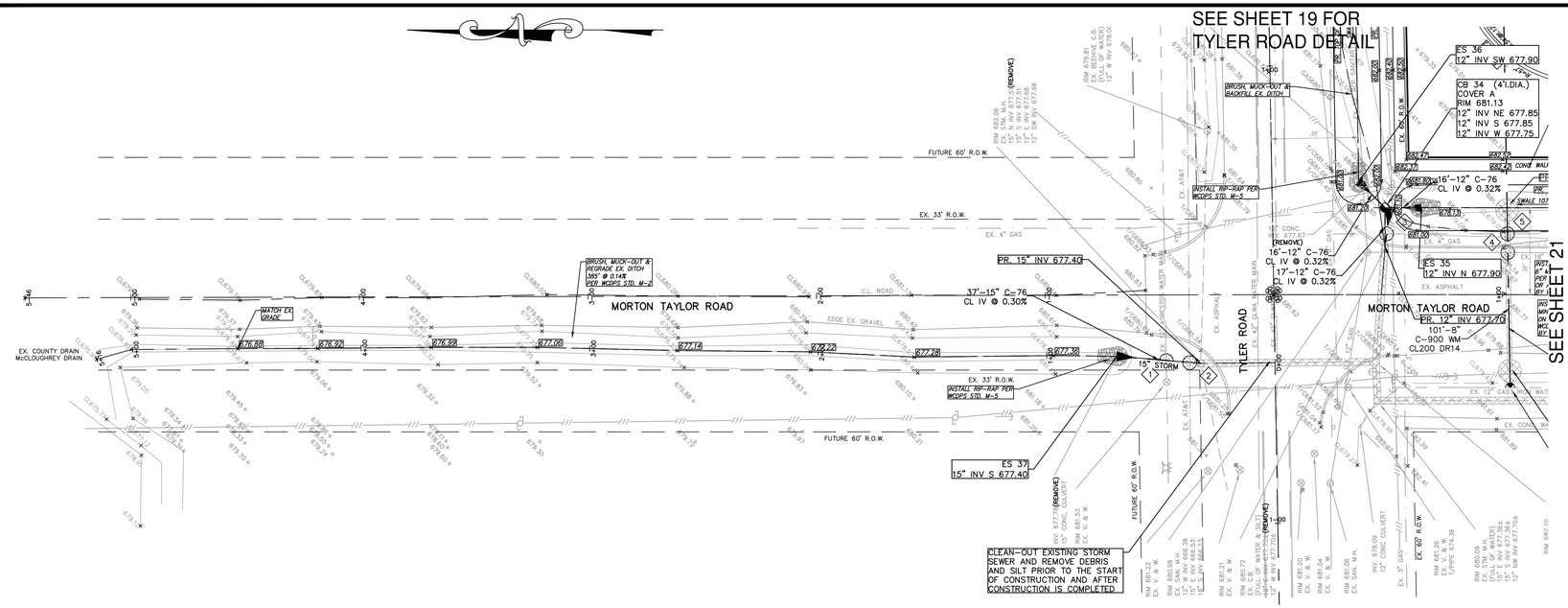
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP TYLER ROAD DETAIL

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1'=30'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 19

F:\19\19-249\Drafting & Engineering\Engineering\19-249-17-24-Grading.dwg, 19-Tyler Road, 5/19/2021 9:27:35 AM, laura.ambros



ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

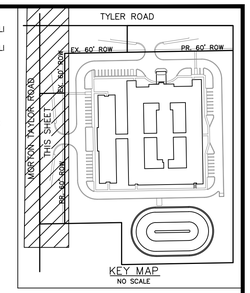
THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OF OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLI ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLI ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

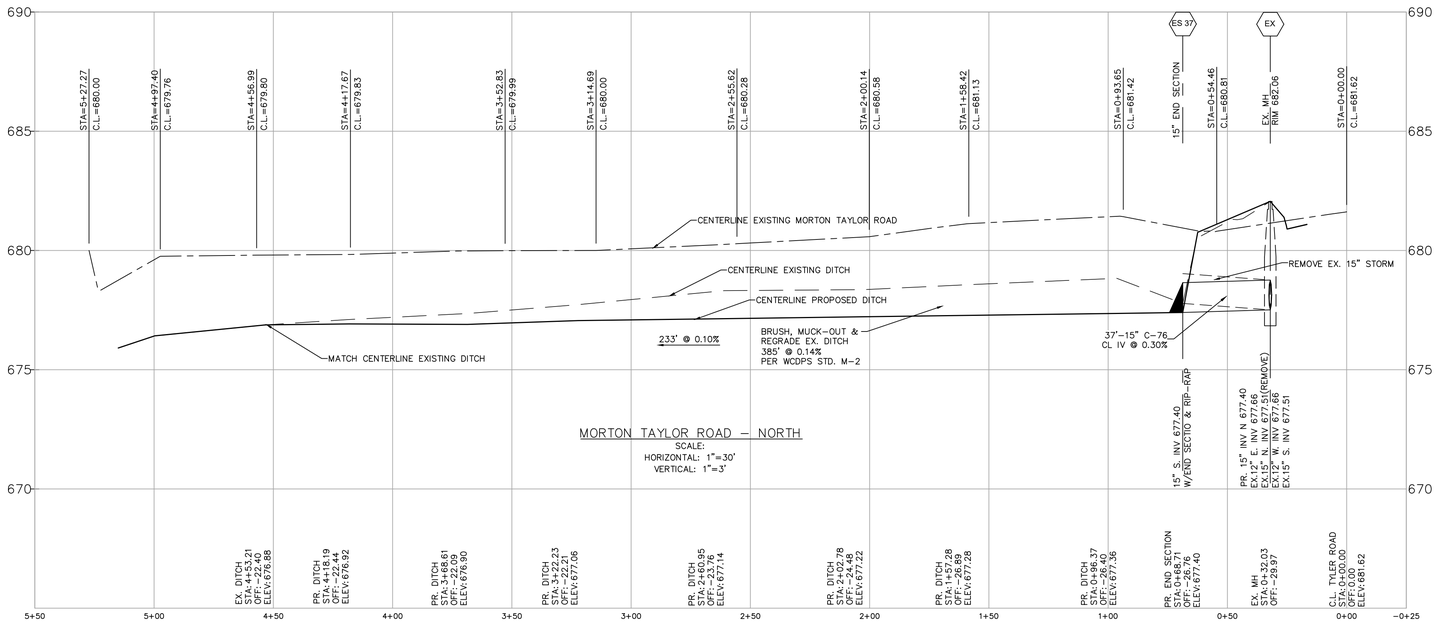


EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG UG UG UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG UG UG UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL



Utility Crossings

Crossing #	Sanitary Diameter	Sanitary Top	Sanitary Bottom	Water Main Diameter	Water Main Top	Water Main Bottom	Storm Diameter	Storm Top	Storm Bottom	Ex. Misc. Util	Ex. Misc. Util Diameter	Ex. Misc. Util Top	Ex. Misc. Util Bottom	Clearance	Lower Water Main	Ground
1				12	676.28	675.28	12	679.09	677.76					0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00		0.00		0.00
3							12	679.63	678.29	4	677.32	676.99		0.97		680.32
4	18	667.80	665.88	8	675.22	674.55								0.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69		2.67		679.02
6				8	674.74	674.07	12	677.57	674.07					1.50	Yes	682.04
7	8	674.19	673.52	8	676.64	675.97								1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97					3.92		680.55
9				8	676.63	675.97	6	678.88	678.13					1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78					1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04					1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96					1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31					1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90		2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40								8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5		2.60		682.06
17	18	667.01	665.09				4	673.90	673.57					6.56		682.06
18				12	675.50	674.50	4	677.92	677.59					2.09		681.50

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES STANDARD NOTES:
1. SEE SHEETS 24–28 FOR WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES STANDARD DETAILS.
2. CONSTRUCT THE PROPOSED TEMPORARY ACCESS DRIVE PER WAYNE COUNTY DETAIL CD–1 OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER AND THE UTILITY COMPANY REPRESENTATIVE.
3. REMOVE EXISTING PAVEMENT, CURB AND GUTTER, DRIVE APPROACHES AND CULVERTS AS SHOWN ON PLANS OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
4. CONSTRUCT DRIVE APPROACHES WITH A MINIMUM 8" NON-REINFORCED CONCRETE WITH INTEGRAL STRAIGHT CURB TYPE "3" PER WAYNE COUNTY DETAIL RS–3 OVER 6 INCH MINIMUM OF 21AA AGGREGATE BASE COURSE COMPACTED IN PLACE TO A MINIMUM OF 95% DENSITY OF MAXIMUM UNIT WEIGHT PER WAYNE COUNTY STANDARD DETAIL, D–6, OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
5. CONSTRUCT THE PROPOSED 5' WIDE SIDEWALK PER WAYNE COUNTY STANDARD DETAIL, RS–5. MAINTAIN MAXIMUM 2% TRANSVERSE SLOPE TOWARD THE ROAD. INSTALL MINIMUM 8" THICKENED CONCRETE SIDEWALK (WITHIN DRIVE APPROACH PLUS MINIMUM 5' ON EACH SIDE) AND 4" ANYWHERE ELSE OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
6. CONSTRUCT TAPERS PER WAYNE COUNTY STANDARD DETAIL, P–2, FOR TYPICAL CONCRETE TAPER. THE TAPERS SHALL BE CONSTRUCTED WITH 2" HMA TOP (F) AND 8" NON–REINFORCED CONCRETE. THE WIDENING SHALL BE CONSTRUCTED WITH 2" HMA TOP (F) AND 8" NON–REINFORCED CONCRETE WITH INTEGRAL STRAIGHT CURB/CURB DROP, TYPE 4 OVER 9" 21 AA AGGREGATE BASE COURSE.
7. DRIVE APPROACH SLOPES SHALL NOT EXCEED 6%.
8. RESTORE THE ROAD RIGHT–OF–WAY PER NOTE 7 IN THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES GENERAL NOTES OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
9. STRUCTURE ADJUSTMENTS SHALL BE DETERMINED ON SITE AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
10. REMOVE, REPLACE, AND RESTORE ALL EXISTING TRAFFIC SIGNS THAT ARE AFFECTED BY THIS CONSTRUCTION AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
11. RELOCATE ANY EXISTING UTILITIES THAT ARE IN CONFLICT WITH THE PROPOSED WORK AS DIRECTED BY THE WAYNE COUNTY ENGINEER AND THE UTILITY COMPANY REPRESENTATIVE.
12. PLACE THE PROPOSED UTILITIES UNDER WAYNE COUNTY JURISDICTION PER SEWER TRENCH "A" DETAIL OR SEWER TRENCH "B" DETAIL IN THE WAYNE COUNTY DETAIL S–12 OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
13. MAINTAIN 18 INCH VERTICAL CLEARANCE AND 3 FEET HORIZONTAL CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES.

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1" = 30'

SEE SHEETS 25-29 FOR WCDPS STANDARD NOTES AND DETAILS

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09–16–20 REV PER WCDPS L.A.
04–01–21 REV PER WCDPS L.A.
05–19–21 REV PER OHM FOR WCDPS L.A.

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989–708–1878
zohaibsyed2001@yahoo.com

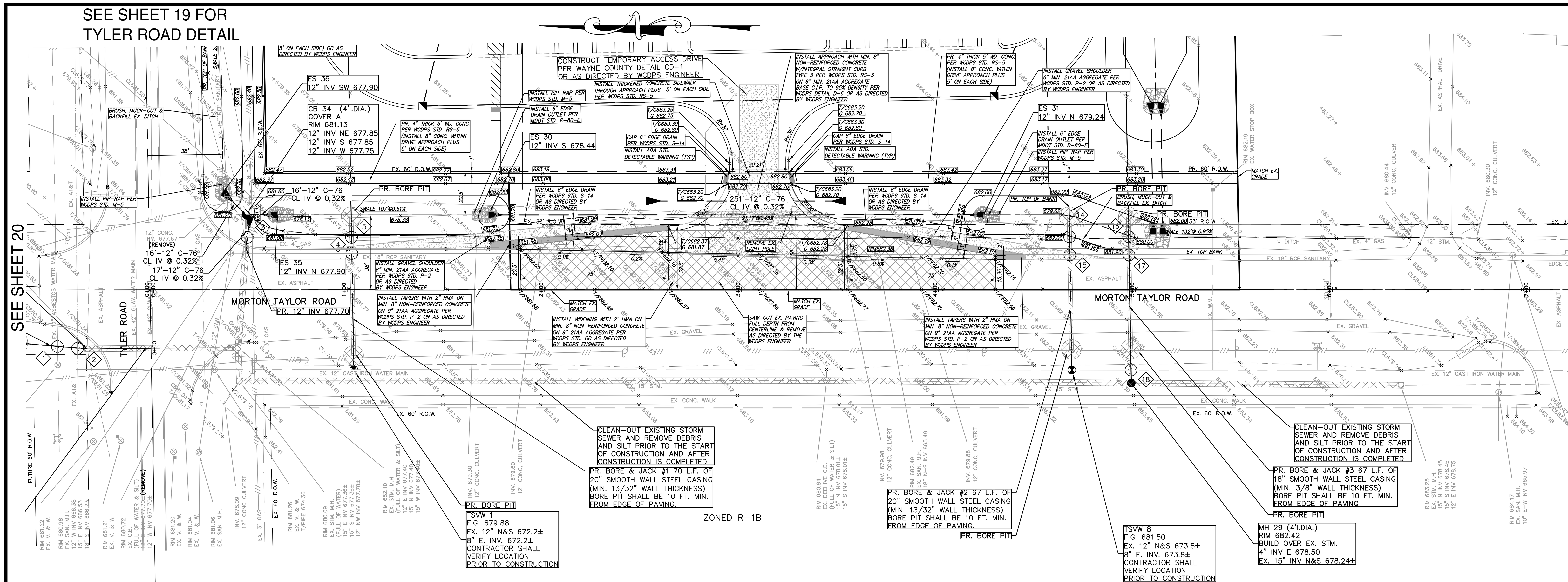
Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

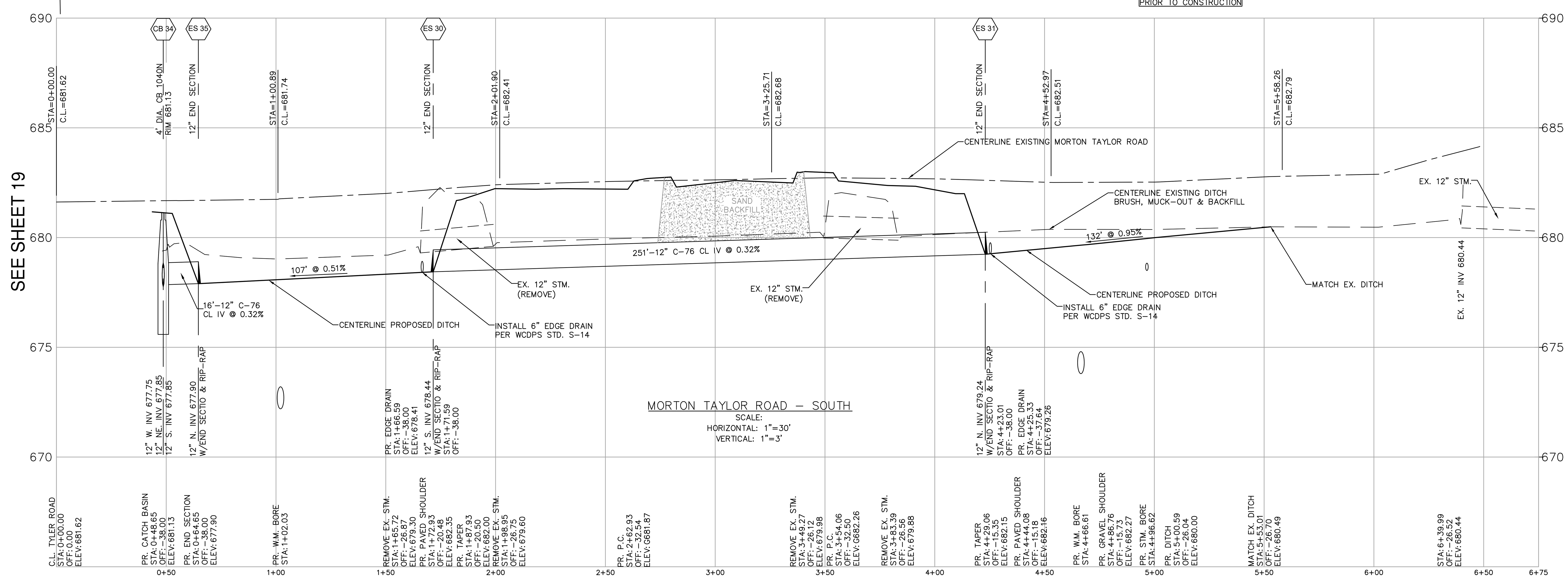
HAMPTON MANOR OF VAN BUREN TOWNSHIP MORTON TAYLOR ROAD NORTH DETAIL

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=30'
Paper Size: 24"x36"
Date: 11–06–19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19–249
Sheet No. 20

F:\19\19-249\Drafting & Engineering\Engineering\19-249-17-24-Grading.dwg, 20-Morton Taylor North, 5/19/2021 9:30:17 AM, laura.ambros





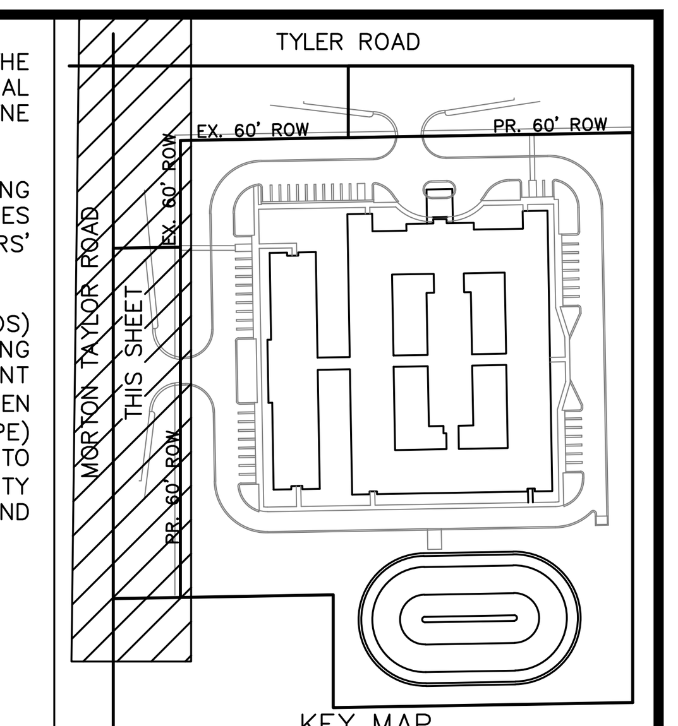
SEE SHEETS 25-29 FOR WCDPS STANDARD NOTES AND DETAILS
SEE SHEET 31 FOR TRAFFIC CONTROL PLAN

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES



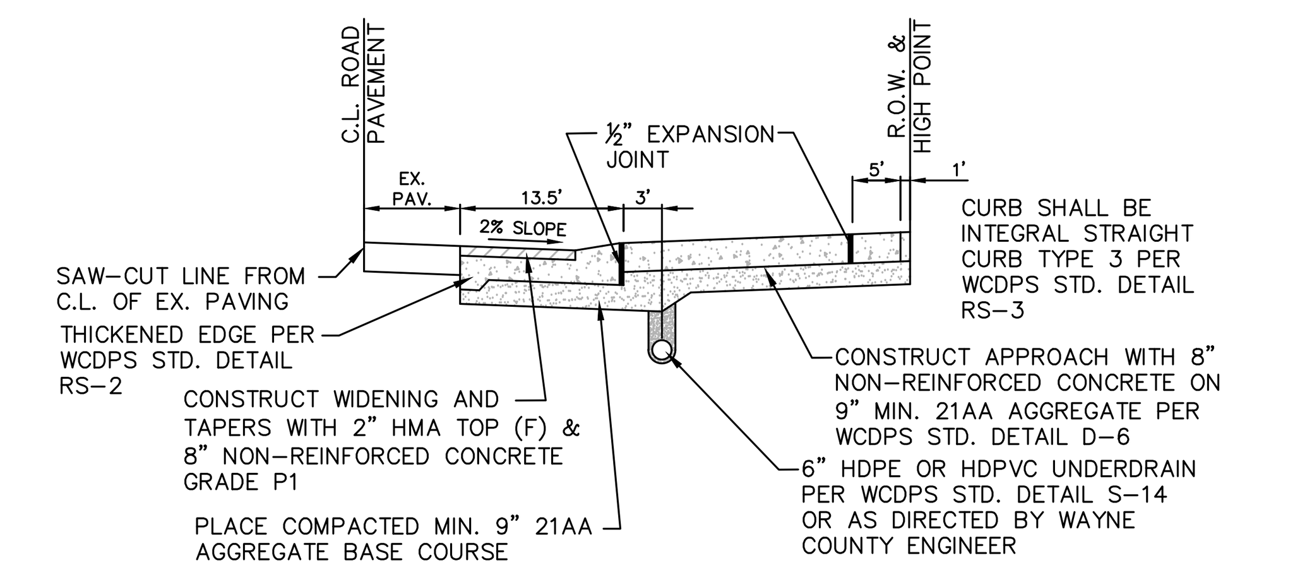
KEY MAP
NO SCALE

PROPOSED LEGEND
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLI ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLI ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM



TYPICAL APPROACH CROSS-SECTION
(N.T.S.)

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES STANDARD NOTES:
1. SEE SHEETS 24-28 FOR WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES STANDARD DETAILS.
2. CONSTRUCT THE PROPOSED TEMPORARY ACCESS DRIVE PER WAYNE COUNTY DETAIL CD-1 OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER AND THE UTILITY COMPANY REPRESENTATIVE.
3. REMOVE EXISTING PAVEMENT, CURB AND GUTTER, DRIVE APPROACHES AND CULVERTS AS SHOWN ON PLANS OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
4. CONSTRUCT DRIVE APPROACHES WITH A MINIMUM 8" NON REINFORCED CONCRETE WITH INTEGRAL STRAIGHT CURB TYPE "3" PER WAYNE COUNTY DETAIL RS-3 OVER 6 INCH MINIMUM OF 21AA AGGREGATE BASE COURSE COMPACTED IN PLACE TO A MINIMUM OF 95% DENSITY OF MAXIMUM UNIT WEIGHT PER WAYNE COUNTY STANDARD DETAIL, D-6, OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
5. CONSTRUCT THE PROPOSED 5' WIDE SIDEWALK PER WAYNE COUNTY STANDARD DETAIL, RS-5. MAINTAIN MAXIMUM 2% TRANSVERSE SLOPE TOWARD THE ROAD. INSTALL MINIMUM 8" THICKENED CONCRETE SIDEWALK (WITHIN DRIVE APPROACH PLUS MINIMUM 5' ON EACH SIDE) AND 4" ANYWHERE ELSE OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
6. CONSTRUCT TAPERS PER WAYNE COUNTY STANDARD DETAIL, P-2, FOR TYPICAL CONCRETE TAPER. THE TAPERS SHALL BE CONSTRUCTED WITH 2" HMA TOP (F) AND 8" NON-REINFORCED CONCRETE. THE WIDENING SHALL BE CONSTRUCTED WITH 2" HMA TOP (F) AND 8" NON-REINFORCED CONCRETE WITH INTEGRAL STRAIGHT CURB/CURB DROP, TYPE 4 OVER 9" 21 AA AGGREGATE BASE COURSE.
7. DRIVE APPROACH SLOPES SHALL NOT EXCEED 6%.
8. RESTORE THE ROAD RIGHT-OF-WAY PER NOTE 7 IN THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES GENERAL NOTES OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
9. STRUCTURE ADJUSTMENTS SHALL BE DETERMINED ON SITE AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
10. REMOVE, REPLACE, AND RESTORE ALL EXISTING TRAFFIC SIGNS THAT ARE AFFECTED BY THIS CONSTRUCTION AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
11. RELOCATE ANY EXISTING UTILITIES THAT ARE IN CONFLICT WITH THE PROPOSED WORK AS DIRECTED BY THE WAYNE COUNTY ENGINEER AND THE UTILITY COMPANY REPRESENTATIVE.
12. PLACE THE PROPOSED UTILITIES UNDER WAYNE COUNTY JURISDICTION PER SEWER TRENCH "A" DETAIL OR SEWER TRENCH "B" DETAIL IN THE WAYNE COUNTY DETAIL S-12 OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
13. MAINTAIN 18 INCH VERTICAL CLEARANCE AND 3 FEET HORIZONTAL CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES.

Utility Crossings

Crossing #	Sanitary Diameter	Sanitary Top	Sanitary Bottom	Water Main Diameter	Water Main Top	Water Main Bottom	Storm Diameter	Storm Top	Storm Bottom	Ex. Misc. Util. Diameter	Ex. Misc. Util. Top	Ex. Misc. Util. Bottom	Clearance	Lower Water Main	Ground
1				12	676.26	675.26	12	679.09	677.76				0.00	No	681.35
0							12	0.00	0.00	0	0.00	0.00	0.00		0.00
3							12	679.63	678.29	4	677.32	676.99	0.97		680.32
4	18	667.80	665.88	8	675.22	674.55							6.75	No	681.22
5				8	673.02	672.35				4	676.02	675.69	2.67		679.02
6				8	674.74	674.07	12	677.57	674.07				1.50	Yes	682.04
7	8	674.19	673.52	8	676.64	675.97							1.78	No	682.64
8	8	674.05	673.38				12	678.13	677.97				3.92		680.55
9				8	676.63	675.97	6	678.88	678.13				1.50	Yes	683.71
10				8	676.28	675.62	6	678.53	677.78				1.50	Yes	683.62
11				8	673.54	672.88	12	676.38	675.04				1.50	Yes	683.58
12				8	675.46	674.79	12	678.29	676.96				1.50	Yes	683.15
13				8	672.81	672.15	18	676.23	674.31				1.50	Yes	683.53
14				8	674.23	673.56				4	677.23	676.90	2.67	No	680.23
15	18	667.05	665.13	8	676.07	675.40							8.35	No	682.07
16							4	673.90	673.57	4	676.5	676.5	2.60		682.06
17	18	667.01	665.09				4	673.90	673.57				6.56		682.06
18				12	675.50	674.50	4	677.92	677.59				2.09		681.50

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1" = 30'

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:	
09-16-20 REV PER WCDPS	L.A.
04-01-21 REV PER WCDPS	L.A.
05-19-21 REV PER OHM FOR WCDPS	L.A.

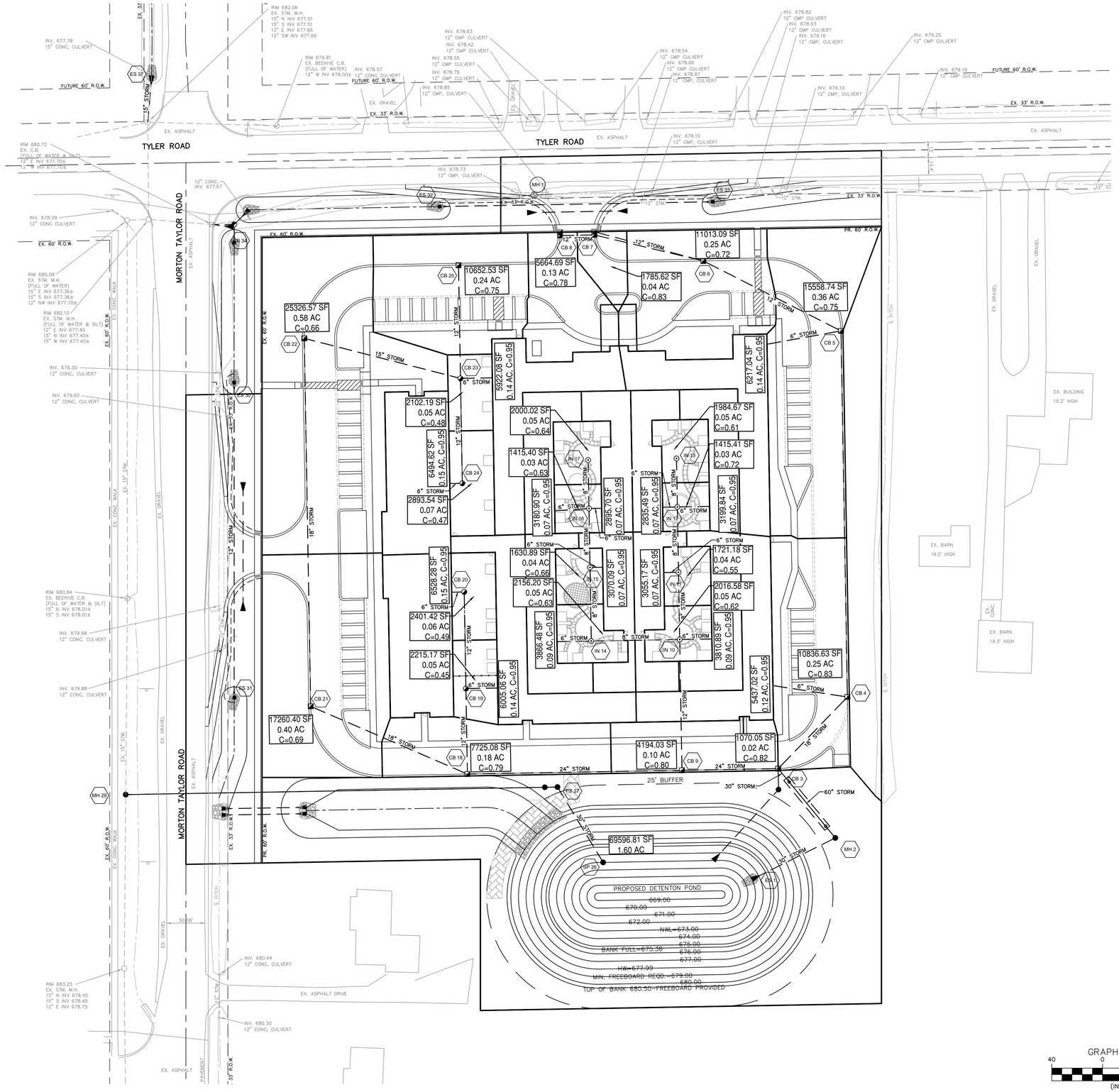
Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP MORTON TAYLOR ROAD SOUTH DETAIL

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1'=30'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 21



ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

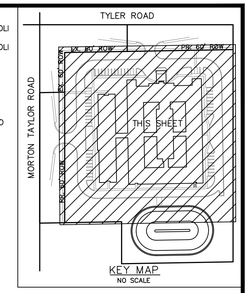
THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLI ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLI ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM



PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG — UG — UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG — UG — UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

SEE SHEETS 24 FOR WEIGHTED RUN-OFF COEFFICIENT FOR EACH DRAINAGE AREA

WAYNE COUNTY R19-949 PLAN REVIEW

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

Revisions:
09-16-20 REV PER WCDPS L.A. 04-01-21 REV PER WCDPS L.A. 05-19-21 REV PER OHM FOR WCDPS L.A.

Client:
SYED IMRAN LAND HOLDING LLC ZOHAIB SYED 1451 S. GRATIOT AVENUE CLINTON TOWNSHIP, MI 48035 989-708-1878 zohaibsyed2001@yahoo.com

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP STORM WATER DRAINAGE PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	1"=40'
Paper Size:	24"x36"
Date:	11-06-19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19-249
Sheet No.	23

F:\19\19-249\Drafting & Engineering\Engineering\19-249-17-24-Grading.dwg, 23-Dmap, 5/19/2021 8:42:45 AM, laura.ambros

HAMPTON MANOR OF VAN BUREN TOWNSHIP PROPOSED STORM SEWER

LEHNER ASSOCIATES

Project: Hampton Manor
Community: Van Buren Twp.
County: Wayne
Job Number: 19-249

I = 151.8/(T+19.9) C= weighted T= 15 MIN.

FROM STRUCTURE	TO STRUCTURE	INCRE-MENT SF (A)	INCRE-MENT ACRES (A)	C	EQUIV. AREA CA	TOTAL AREA SUM CA	T TIME (MIN.)	I (IN PER HOUR)	Q=CIA C.F.S. FLOW	DIAM. OF PIPE (IN.)	LENGTH OF LINE (FT.)	SLOPE OF PIPE (%)	HG (%)	VEL. FLOW FULL FT/SEC	TIME FLOW (MIN.)	CAPAC-ITY OF SEWER (C.F.S.)	HYDRAULIC GRADE UP STREAM	HYDRAULIC GRADE DOWN STREAM	INVERT ELEVATION UPPER END	INVERT ELEVATION LOWER END	RIM ELEVATION UPPER END	RIM ELEVATION LOWER END	HG COVER UPPER END	HG COVER LOWER END
CB 25	CB 23	10652.53	0.24	0.75	0.18	0.18	15.00	4.35	**0.80**	12	89	0.32	0.32	2.6	0.58	**2.02**	677.66	677.38	676.46	676.18	681.63	683.00	3.97	5.62
ROOF	CB 24	6494.62	0.15	0.95	0.14	0.14	15.00	4.35	**0.62**	6	10	2.00	2.00	4.0	0.04	**0.79**	678.93	678.73	678.53	678.33	684.00	683.00	5.07	4.27
CB 24	CB 23	2893.54	0.07	0.47	0.03	0.17	15.04	4.34	**0.75**	12	83	0.32	0.32	2.6	0.54	**2.02**	678.63	678.37	677.83	677.57	683.00	683.00	4.37	4.63
ROOF	CB 23	5922.08	0.14	0.95	0.13	0.13	15.00	4.35	**0.56**	6	25	2.00	2.00	4.0	0.10	**0.79**	679.32	678.82	678.92	678.42	684.00	683.00	4.68	4.18
CB 23	CB 22	2102.19	0.05	0.48	0.02	0.51	15.58	4.28	**2.18**	15	127	0.24	0.24	2.6	0.82	**3.16**	677.28	676.97	675.88	675.57	683.00	681.10	5.72	4.13
CB 22	CB 21	25326.57	0.58	0.66	0.39	0.90	16.40	4.18	**3.75**	18	290	0.18	0.18	2.5	1.92	**4.46**	676.87	676.35	675.27	674.75	681.10	681.60	4.23	5.25
CB 21	CB 18	17260.40	0.40	0.69	0.27	1.17	18.32	3.97	**4.65**	18	134	0.20	0.20	2.7	0.84	**4.70**	676.35	676.08	674.65	674.38	681.60	682.04	5.25	5.96
ROOF	CB 20	6528.28	0.15	0.95	0.14	0.14	15.00	4.35	**0.62**	6	10	2.00	2.00	4.0	0.04	**0.79**	678.93	678.73	678.53	678.33	684.00	683.00	5.07	4.27
CB 20	CB 19	2401.42	0.06	0.49	0.03	0.17	15.04	4.34	**0.74**	12	76	0.32	0.32	2.6	0.49	**2.02**	678.63	678.39	677.83	677.59	683.00	683.00	4.37	4.61
ROOF	CB 19	6005.06	0.14	0.95	0.13	0.13	15.00	4.35	**0.57**	6	25	2.00	2.00	4.0	0.10	**0.79**	679.32	678.82	678.92	678.42	684.00	683.00	4.68	4.18
CB 19	CB 18	2215.17	0.05	0.45	0.02	0.32	15.53	4.28	**1.39**	12	67	1.22	1.22	5.0	0.22	**3.94**	678.39	677.57	677.59	676.77	683.00	682.04	4.61	4.47
CB 18	CB 9	7725.08	0.18	0.79	0.14	1.63	19.16	3.89	**6.35**	24	169	0.12	0.12	2.5	1.13	**7.84**	675.98	675.78	673.88	673.68	682.04	682.44	6.06	6.66
IN 17	IN 16	2000.02	0.05	0.64	0.03	0.03	15.00	4.35	**0.13**	8	38	0.80	0.80	3.1	0.20	**1.08**	679.55	679.24	678.72	678.42	683.50	683.50	3.95	4.26
ROOF(W)	IN 16	3180.90	0.07	0.95	0.07	0.07	15.00	4.35	**0.30**	6	27	1.00	1.00	2.9	0.16	**0.56**	679.61	679.34	679.19	678.92	684.00	683.50	4.39	4.16
ROOF(E)	IN 16	2895.70	0.07	0.95	0.06	0.06	15.00	4.35	**0.27**	6	10	1.00	1.00	2.9	0.06	**0.56**	679.44	679.34	679.02	678.92	684.00	683.50	4.56	4.16
IN 16	IN 15	1415.40	0.03	0.63	0.02	0.18	15.20	4.32	**0.79**	8	46	0.80	0.80	3.1	0.25	**1.08**	679.24	678.88	678.42	678.05	683.50	683.50	4.26	4.62
ROOF	IN 15	3070.09	0.07	0.95	0.07	0.07	15.00	4.35	**0.29**	6	10	1.00	1.00	2.9	0.06	**0.56**	679.42	679.32	679.02	678.92	684.00	683.50	4.58	4.18
IN 15	IN 14	1630.89	0.04	0.66	0.02	0.27	15.45	4.29	**1.18**	8	58	1.00	1.00	3.5	0.28	**1.21**	678.88	678.30	678.05	677.47	683.50	683.50	4.62	5.20
ROOF	IN 14	3866.48	0.09	0.95	0.08	0.08	15.00	4.35	**0.37**	6	27	1.00	1.00	2.9	0.16	**0.56**	679.59	679.32	679.19	678.92	684.00	683.50	4.41	4.18
IN 14	IN 10	2156.20	0.05	0.63	0.03	0.39	15.73	4.26	**1.66**	8	70	1.90	1.90	4.8	0.24	**1.67**	678.20	676.87	677.37	676.04	683.50	683.50	5.30	6.63
IN 13	IN 12	1984.67	0.05	0.61	0.03	0.03	15.00	4.35	**0.12**	8	38	0.80	0.80	3.1	0.20	**1.08**	679.26	678.95	678.72	678.42	683.50	683.50	4.24	4.55
ROOF(W)	IN 12	2835.49	0.07	0.95	0.06	0.06	15.00	4.35	**0.27**	6	12	1.00	1.00	2.9	0.07	**0.56**	679.44	679.32	679.04	678.92	684.00	683.50	4.56	4.18
ROOF(E)	IN 12	3199.84	0.07	0.95	0.07	0.07	15.00	4.35	**0.30**	6	25	1.00	1.00	2.9	0.15	**0.56**	679.57	679.32	679.17	678.92	684.00	683.50	4.43	4.18
IN 12	IN 11	1415.41	0.03	0.72	0.02	0.18	15.20	4.32	**0.79**	8	51	0.80	0.80	3.1	0.27	**1.08**	678.95	678.54	678.42	678.01	683.50	683.50	4.55	4.96
ROOF	IN 11	3055.17	0.07	0.95	0.07	0.07	15.00	4.35	**0.29**	6	12	1.00	1.00	2.9	0.07	**0.56**	679.44	679.32	679.04	678.92	684.00	683.50	4.56	4.18
IN 11	IN 10	1721.18	0.04	0.55	0.02	0.27	15.48	4.29	**1.16**	8	53	1.00	1.00	3.5	0.26	**1.21**	678.54	678.01	678.01	677.48	683.50	683.50	4.96	5.49
ROOF	IN 10	3810.89	0.09	0.95	0.08	0.08	15.00	4.35	**0.36**	6	25	1.00	1.00	2.9	0.15	**0.56**	679.57	679.32	679.17	678.92	684.00	683.50	4.43	4.18
IN 10	CB 9	2016.58	0.05	0.62	0.03	0.77	15.98	4.23	**3.27**	12	103	0.86	0.86	4.2	0.41	**3.30**	676.77	675.88	675.67	674.79	683.50	682.44	6.73	6.56
CB 9	CB 3	4194.03	0.10	0.80	0.08	2.48	20.28	3.78	**9.38**	24	76	0.18	0.18	3.1	0.41	**9.60**	675.78	675.64	673.68	673.54	682.44	682.60	6.66	6.96
CB 8	CB 7	5664.69	0.13	0.78	0.10	0.10	15.00	4.35	**0.44**	12	27	0.32	0.32	2.6	0.18	**2.02**	677.44	677.35	676.52	676.44	681.69	681.69	4.25	4.34
CB 7	CB 6	1785.62	0.04	0.83	0.03	0.13	15.18	4.33	**0.58**	12	89	0.32	0.32	2.6	0.58	**2.02**	677.35	677.07	676.44	676.15	681.69	682.00	4.34	4.93
CB 6	CB 5	11013.09	0.25	0.72	0.18	0.32	15.75	4.26	**1.35**	12	122	0.32	0.32	2.6	0.79	**2.02**	677.07	676.68	676.15	675.76	682.00	681.86	4.93	5.18
ROOF	CB 5	6217.04	0.14	0.95	0.14	0.14	15.00	4.35	**0.59**	6	59	2.00	2.00	4.0	0.24	**0.79**	678.86	677.68	678.46	677.28	684.00	681.86	5.14	4.18
CB 5	CB 4	15558.74	0.36	0.75	0.27	0.72	16.55	4.17	**3.00**	15	289	0.24	0.24	2.6	1.87	**3.16**	676.58	675.88	675.46	674.77	681.86	682.00	5.28	6.12
ROOF	CB 4	5437.02	0.12	0.95	0.12	0.12	15.00	4.35	**0.52**	6	59	1.00	1.00	2.9	0.34	**0.56**	678.41	677.82	678.01	677.42	684.00	682.00	5.59	4.18
CB 4	CB 3	10836.63	0.25	0.83	0.21	1.05	18.41	3.96	**4.14**	18	78	0.18	0.18	2.5	0.52	**4.46**	675.78	675.64	674.47	674.33	682.00	682.60	6.22	6.96
CB 3	KSI3500	1070.05	0.02	0.82	0.02	3.55	20.70	3.74	**13.27**	30	10	0.11	0.11	2.8	0.06	**13.60**	675.54	675.53	673.04	673.03	682.60	682.34	7.06	6.81
KSI3500	KSI3500	0.00	0.00	0.00	0.00	3.55	20.76	3.73	**13.25**	60	51	0.11	0.11	4.4	0.19	**86.38**	675.53	675.48	673.03	672.98	682.34	680.74	6.81	5.26
KSI3500	MH 2	0.00	0.00	0.00	0.00	3.55	20.95	3.72	**13.19**	30	10	0.11	0.11	2.8	0.06	**13.60**	675.48	675.47	672.98	672.97	680.74	680.75	5.26	5.28
MH 2	ES 1	0.00	0.00	0.00	0.00	3.55	21.01	3.71	**13.17**	30	73	0.11	0.11	2.8	0.44	**13.60**	---	---	672.97	672.89	680.75	---	---	---
																Start HG-Grow n		675.47						
																@30" pretreatment outlet								

WEIGHTED COEFFICIENT OF IMPERVIOUSNESS
Soil Group D

STRUCTURE #	GROSS AREA		SURFACE		AREA (A)					C	CxA	C weighted
CB 3	1070.05	sf	Paving	=	788.83	sf	=	0.02	acres	0.95	0.02	0.82
			Lawn	=	281.22	sf	=	0.01	acres	0.45	0.00	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 4	5437.02	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	5437.02	sf	=	0.12	acres	0.95	0.12	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 4	10836.63	sf	Paving	=	8299.71	sf	=	0.19	acres	0.95	0.18	0.83
			Lawn	=	2536.92	sf	=	0.06	acres	0.45	0.03	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 5	6217.04	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	6217.04	sf	=	0.14	acres	0.95	0.14	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 5	15558.74	sf	Paving	=	9199.88	sf	=	0.21	acres	0.95	0.20	0.75
			Lawn	=	6358.86	sf	=	0.15	acres	0.45	0.07	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 6	11013.09	sf	Paving	=	6009.96	sf	=	0.14	acres	0.95	0.13	0.72
			Lawn	=	5003.13	sf	=	0.11	acres	0.45	0.05	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 7	1785.62	sf	Paving	=	1365.98	sf	=	0.03	acres	0.95	0.03	0.83
			Lawn	=	419.64	sf	=	0.01	acres	0.45	0.00	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 8	5664.69	sf	Paving	=	3689.69	sf	=	0.08	acres	0.95	0.08	0.78
			Lawn	=	1975.00	sf	=	0.05	acres	0.45	0.02	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 9	4194.03	sf	Paving	=	2966.78	sf	=	0.07	acres	0.95	0.06	0.80
			Lawn	=	1227.25	sf	=	0.03	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 10	3810.89	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	3810.89	sf	=	0.09	acres	0.95	0.08	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 10	2016.58	sf	Paving	=	702.77	sf	=	0.02	acres	0.95	0.02	0.62
			Lawn	=	1313.81	sf	=	0.03	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 11	3055.17	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	3055.17	sf	=	0.07	acres	0.95	0.07	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 11	1721.18	sf	Paving	=	343.54	sf	=	0.01	acres	0.95	0.01	0.55
			Lawn	=	1377.64	sf	=	0.03	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 12W	2835.49	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	2835.49	sf	=	0.07	acres	0.95	0.06	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 12E	3199.84	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	3199.84	sf	=	0.07	acres	0.95	0.07	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 12	1415.41	sf	Paving	=	758.71	sf	=	0.02	acres	0.95	0.02	0.72
			Lawn	=	656.70	sf	=	0.02	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 13	1984.67	sf	Paving	=	650.40	sf	=	0.01	acres	0.95	0.01	0.61
			Lawn	=	1334.27	sf	=	0.03	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 14	3866.48	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	3866.48	sf	=	0.09	acres	0.95	0.08	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 14	2156.20	sf	Paving	=	794.83	sf	=	0.02	acres	0.95	0.02	0.63
			Lawn	=	1361.37	sf	=	0.03	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 15	3070.09	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	3070.09	sf	=	0.07	acres	0.95	0.07	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 15	1630.89	sf	Paving	=	669.29	sf	=	0.02	acres	0.95	0.01	0.66
			Lawn	=	961.60	sf	=	0.02	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	

WEIGHTED COEFFICIENT OF IMPERVIOUSNESS
Soil Group D

STRUCTURE #	GROSS AREA		SURFACE		AREA (A)					C	CxA	C weighted
ROOF 16W	3180.90	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	3180.90	sf	=	0.07	acres	0.95	0.07	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 16E	2895.70	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	2895.70	sf	=	0.07	acres	0.95	0.06	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 16	1415.40	sf	Paving	=	505.56	sf	=	0.01	acres	0.95	0.01	0.63
			Lawn	=	909.84	sf	=	0.02	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
IN 17	2000.02	sf	Paving	=	753.59	sf	=	0.02	acres	0.95	0.02	0.64
			Lawn	=	1246.43	sf	=	0.03	acres	0.45	0.01	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 18	7725.08	sf	Paving	=	5237.97	sf	=	0.12	acres	0.95	0.11	0.79
			Lawn	=	2487.11	sf	=	0.06	acres	0.45	0.03	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 19	6005.06	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	6005.06	sf	=	0.14	acres	0.95	0.13	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 19	2215.17	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.45
			Lawn	=	2215.17	sf	=	0.05	acres	0.45	0.02	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 20	6528.28	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	6528.28	sf	=	0.15	acres	0.95	0.14	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 20	2401.42	sf	Paving	=	214.05	sf	=	0.00	acres	0.95	0.00	0.49
			Lawn	=	2187.37	sf	=	0.05	acres	0.45	0.02	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 21	17260.40	sf	Paving	=	8322.80	sf	=	0.19	acres	0.95	0.18	0.69
			Lawn	=	8937.60	sf	=	0.21	acres	0.45	0.09	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 22	25326.57	sf	Paving	=	10828.73	sf	=	0.25	acres	0.95	0.24	0.66
			Lawn	=	14497.84	sf	=	0.33	acres	0.45	0.15	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 23	5922.08	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	5922.08	sf	=	0.14	acres	0.95	0.13	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 23	2102.19	sf	Paving	=	128.00	sf	=	0.00	acres	0.95	0.00	0.48
			Lawn	=	1974.19	sf	=	0.05	acres	0.45	0.02	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
ROOF 24	6494.62	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.95
			Lawn	=	0.00	sf	=	0.00	acres	0.45	0.00	
			Roof	=	6494.62	sf	=	0.15	acres	0.95	0.14	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 24	2893.54	sf	Paving	=	128.00	sf	=	0.00	acres	0.95	0.00	0.47
			Lawn	=	2765.54	sf	=	0.06	acres	0.45	0.03	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
CB 25	10652.53	sf	Paving	=	6490.89	sf	=	0.15	acres	0.95	0.14	0.75
			Lawn	=	4161.64	sf	=	0.10	acres	0.45	0.04	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	0.00	sf	=	0.00	acres	1.00	0.00	
DETENTION	69596.81	sf	Paving	=	0.00	sf	=	0.00	acres	0.95	0.00	0.62
			Lawn	=	48353.57	sf	=	1.11	acres	0.45	0.50	
			Roof	=	0.00	sf	=	0.00	acres	0.95	0.00	
			Water	=	21243.24	sf	=	0.49	acres	1.00	0.49	

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

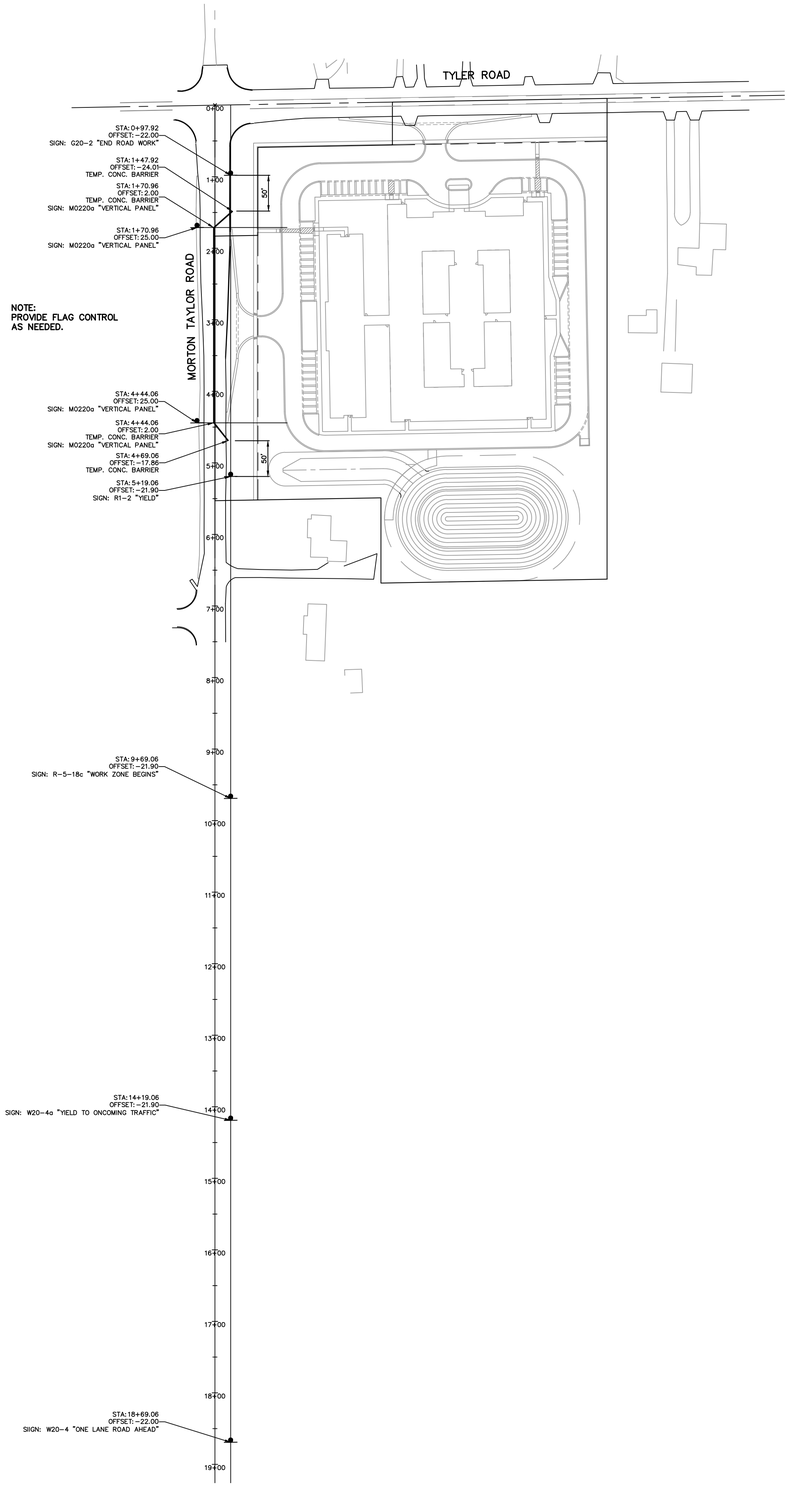
Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

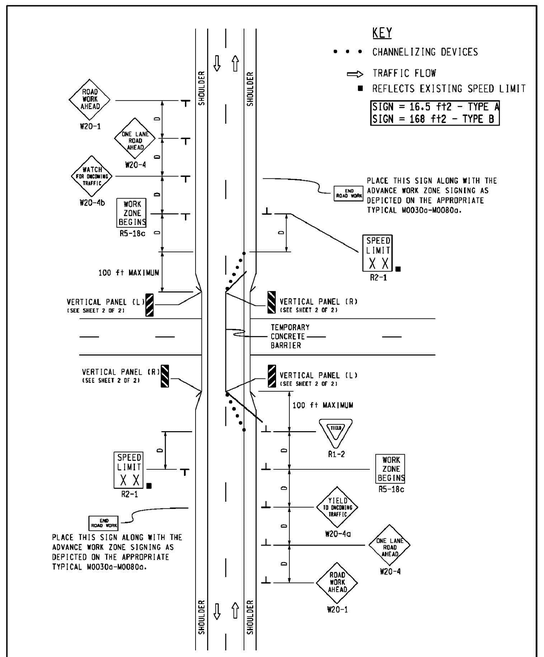
HAMPTON MANOR OF VAN BUREN TOWNSHIP STORM SEWER DESIGN CALCULATIONS

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: NO SCALE
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No.: 24

F:\19\19-249\Drafting & Engineering\Engineering\19-249-17-24-Grading.dwg, 24-Calcs, 5/19/2021 9:44:49 AM, laura.ambros





NOT TO SCALE

MDOT Michigan Department of Transportation	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING A YIELD TO ONCOMING TRAFFIC SEQUENCE NO SPEED REDUCTION	
TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL		
DRAWN BY: CONJAE.tdlf CHECKED BY: BMH/CRB	OCTOBER 2011 PLAN DATE:	M0220a SHEET 1 OF 2
FILE: P# RD/TS/Typicals/Signs/MT NON FWY/M0220a.dgn REV. 10/11/2011		

NOTES

1A. SEE M0020a FOR "D" VALUES.

2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.

3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.

3A. THE "WORK ZONE BEGINS" (R5-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.

4C. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES IN THE TAPER AREA(S) SHOULD BE 15 FEET.

5. FOR OVERNIGHT CLOSURES, TYPE III BARRICADES SHALL BE LIGHTED.

6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.

7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHLY REQUIREMENTS STIPULATED IN THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.

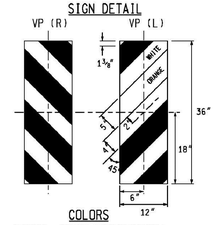
21. ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS, SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR DAYTIME-ONLY TRAFFIC PATTERNS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.

22. BARRIER REFLECTORS AND RAISED PAVEMENT MARKERS WHICH ARE EITHER BI-DIRECTIONAL TWO COLOR OR SINGLE REFLECTORS PLACED BACK TO BACK, WHICH REFLECT THE APPROPRIATE COLOR FOR THE TRAFFIC PATTERN, SHOULD BE USED TO DELINEATE EACH EDGE OF THE TRAVELED PATH THROUGH THE WORK AREA.

23. TEMPORARY CONCRETE BARRIER SHALL BE APPLIED AS PER THE CURRENT STANDARD PLAN.

25. THIS SEQUENCE SHOULD ONLY BE USED WHEN TRAFFIC VOLUMES ARE LOW, SIGHT DISTANCE IS GOOD, AND THE CLOSED LANE IS RELATIVELY SHORT IN LENGTH.

SIGN DETAIL



COLORS

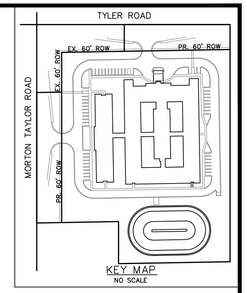
STRIPES - ORANGE (REFLECTORIZED)
AND WHITE (REFLECTORIZED)

SIGN SIZES

DIAMOND WARNING	- 48" x 48"
R1-2 REGULATORY	- 48" x 48" x 48"
R2-1 REGULATORY	- 48" x 60"
R5-18c REGULATORY	- 48" x 48"
VERTICAL PANEL	- 12" x 36"

NOT TO SCALE

MDOT Michigan Department of Transportation	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING A YIELD TO ONCOMING TRAFFIC SEQUENCE NO SPEED REDUCTION	
TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL		
DRAWN BY: CONJAE.tdlf CHECKED BY: BMH/CRB	OCTOBER 2011 PLAN DATE:	M0220a SHEET 2 OF 2
FILE: P# RD/TS/Typicals/Signs/MT NON FWY/M0220a.dgn REV. 10/11/2011		



KEY MAP
NO SCALE

W20-4a
48" x 48"

C20-2
48" x 24"

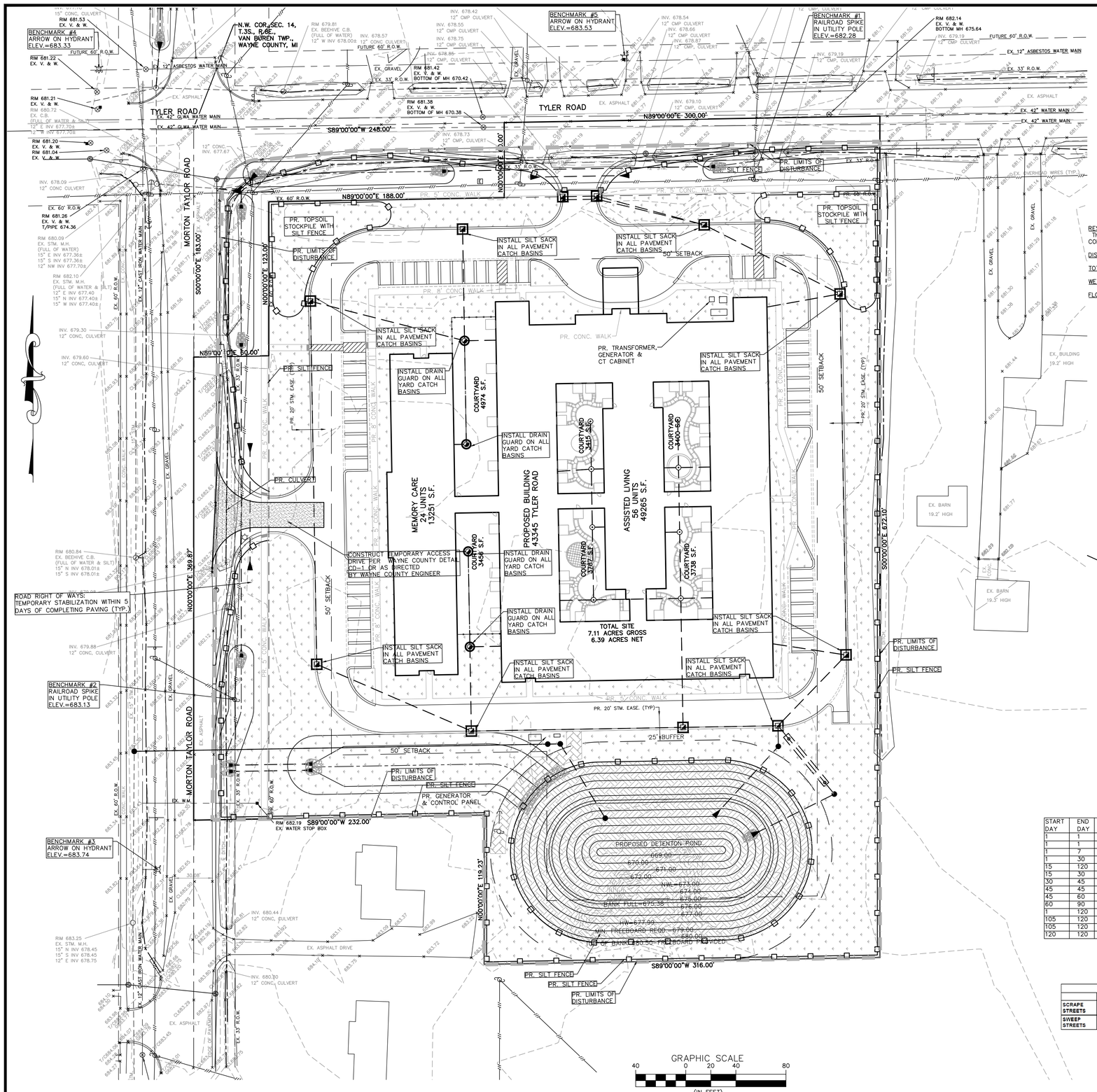
R5-18c
48" x 48"

W20-4
48" x 48"

R1-2
36" x 36" x 36" (4 ft2)
48" x 48" x 48" (7 ft2)

Revisions:	Lehner Associates, Inc.	Scale: 1"=40'
09-16-20 REV PER WCDPS L.A. 04-01-21 REV PER WCDPS L.A. 05-19-21 REV PER OHM FOR WCDPS L.A.	Civil Engineers | Surveying | Planning | Consulting Serving Michigan Since 1912 17001 Nineteen Mile Road, Suite 3 Clinton Township, Michigan 48038 o: 586.412.7050 | f: 586.412.7114 www.lehnerassociates.com	Paper Size: 24"x36"
		Date: 11-06-19
		Drawn By: L.A.
Client:	HAMPTON MANOR OF VAN BUREN TOWNSHIP MORTON TAYLOR ROAD TRAFFIC CONTROL PLAN	Checked By: W.J.T.
SYED IMRAN LAND HOLDING LLC ZOHAIB SYED 1451 S. GRATIOT AVENUE CLINTON TOWNSHIP, MI 48035 989-708-1878 zohaibsyed2001@yahoo.com	PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN	Job No.: 19-249
		Sheet No. 31

F:\19\19-249\Drafting & Engineering\Engineering\19-249-31-MortonTaylorTrafficControl.dwg, 31-Traffic Control, 5/19/2021 10:51:34 AM, laura.ambros

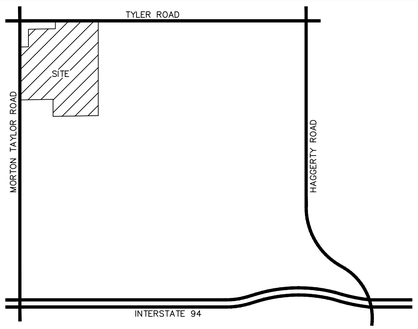


BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.28 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.13 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.74 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.33 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.53 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

SOIL EROSION LEGEND

- LIMITS OF DISTURBANCE
- SILT FENCE
- SEED AND MULCH
- SILT SACK
- DRAIN GUARD
- MULCH BLANKET



LOCATION MAP
SCALE: 4"=1 MILE

RESPONSIBLE PARTY:
THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.

DISTANCE TO NEAREST WATERCOURSE: 5,700 FEET SOUTH TO THE HURON RIVER.

TOTAL AREA OF DISTURBANCE: 8 ACRES, N.P.D.E.S., N.O.C. IS REQUIRED.

WETLANDS STATEMENT: NO WETLANDS ARE ON THE SITE.

FLOODPLAIN STATEMENT: NO FLOODPLAINS ARE ON THE SITE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

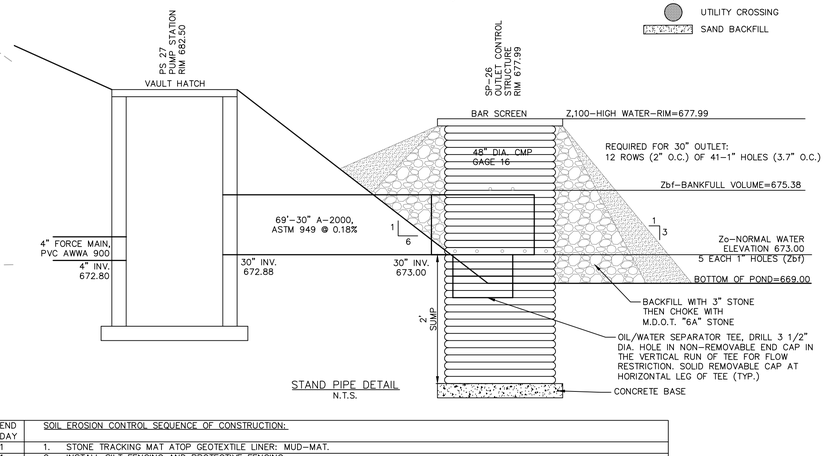
811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG — UG — UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL



STAND PIPE DETAIL
N.T.S.

START DAY	END DAY	SOIL EROSION CONTROL SEQUENCE OF CONSTRUCTION:
1	1	1. STONE TRACKING MAT ATOP GEOTEXTILE LINER: MUD-MAT.
1	1	2. INSTALL SILT FENCING AND PROTECTIVE FENCING.
1	7	3. STRIP AND STOCKPILE TOPSOIL.
1	30	4. GRADE AND BALANCE AS REQUIRED. STABILIZE DITCHES, SWALES, COMMON AREAS AND SLOPES PER PLAN WITHIN 5 DAYS OF GRADE.
15	120	5. CONSTRUCT BUILDING.
15	30	6. EXCAVATE DETENTION BASIN, INSTALL APPROVED OUTLET, STABILIZE BASIN BEFORE PAVING IS STARTED.
30	45	7. INSTALL UNDERGROUND UTILITIES: I.E. SANITARY, STORM, AND WATER MAIN.
45	45	8. PLACE INLET FILTERS.
45	60	9. INSTALL ALL PUBLIC UTILITIES COMPLETE: ELECTRIC, TELEPHONE, AND CABLE T.V.
60	90	10. INSTALL PAVEMENT COMPLETE.
1	120	11. ESTABLISH VEGETATION FOR ALL DISTURBED AREAS AND ROAD/R.O.W.s
105	120	12. CLEAN OUT STORM SEWERS SYSTEM.
105	120	13. CLEAN OUT AND RESTORE SEDIMENT BASIN AND DETENTION POND TO DESIGN SPECIFICATIONS.
120	120	14. REMOVE SILT FENCE AND CATCH BASIN FILTERS FOLLOWING WC-DPS APPROVAL; CALL FOR FINAL INSPECTION.

STREET CLEANING SCHEDULE

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SCRAPE STREETS		X	X	X	X	X	X
SWEEP STREETS				X			

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A.
04-01-21 REV PER WCDPS L.A.
05-19-21 REV PER OHM FOR WCDPS L.A.

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

Client:
SYED IMRAN LAND HOLDING LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP SOIL EROSION AND SEDIMENTATION CONTROL PLAN

PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 32

F:\19\19-249\Drafting & Engineering\Engineering\19-249-32-33-SoilErosion.dwg, 32-Soil, 5/19/2021 10:55:03 AM, laura.ambros

EROSION CONTROL STANDARD NOTES

1. ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES.

2. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.

3. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED WITHIN THE WORK AREA AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS AND WETLANDS.

4. THE CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS DIRECTED ON THESE PLANS AND WHERE OTHERWISE REQUIRED BY THE WORK. THE CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER CHANGES HAVE BEEN ACCOMPLISHED.

5. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF DIRT OFF THE WORK AREA.

6. THE CONTRACTOR SHALL PRESERVE OFF-SITE NATURAL VEGETATION AS MUCH AS POSSIBLE.

7. PROTECT ALL EXISTING TREES , INCLUDING THEIR BRANCHES AND ROOTS, FROM DAMAGE DUE TO THIS WORK UNLESS SPECIFICALLY IDENTIFIED FOR REMOVAL.

8. ALL EXPOSED EARTH SHALL BE STABILIZED WITH SEED AND MULCH OR SOD WITHIN 5 DAYS OF FINAL GRADE. SEDIMENT AND DETENTION BASINS, SWALES AND DITCHES SHALL BE STABILIZED WITH SEED AND STRAW MULCH BLANKETS, STAKED INTO THE GROUND 5 DAYS AFTER THE CONSTRUCTION OF THE SEDIMENT AND DETENTION BASINS, SWALES AND DITCHES.

9. THE CONTRACTOR SHALL SCRAPE THE STREETS DAILY, AND SWEEP THE STREETS WEEKLY.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL AND SHALL PROVIDE ALL EQUIPMENT AND MATERIAL TO KEEP DUST IN CHECK AT ALL TIMES. THE CONTRACTOR SHALL RESPOND IMMEDIATELY TO ANY AND ALL COMPLAINTS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NPDES PERMIT AND ENSURING COMPLIANCE WITH ALL APPLICABLE PERMIT REGULATIONS, INCLUDING BUT NOT LIMITED TO, INSPECTION, RESTORATION AND RECORD KEEPING REQUIREMENTS. REPORTS FROM THE CERTIFIED STORM WATER OPERATOR SHALL BE MADE AVAILABLE TO WAYNE COUNTY.

DESCRIPTIONS ARE PREPARED FROM EXISTING VAN BUREN TOWNSHIP TAX RECORDS. ALL PARCELS SHALL BE COMBINED AFTER PURCHASE OF PROPERTY IS COMPLETED.

PARCEL 1: PARCEL #83-054-99-0012-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 333 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE NORTH 333 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 294.87 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 548 FEET; THENCE NORTH 219.87 FEET TO THE POINT OF BEGINNING. 4.18 ACRES.

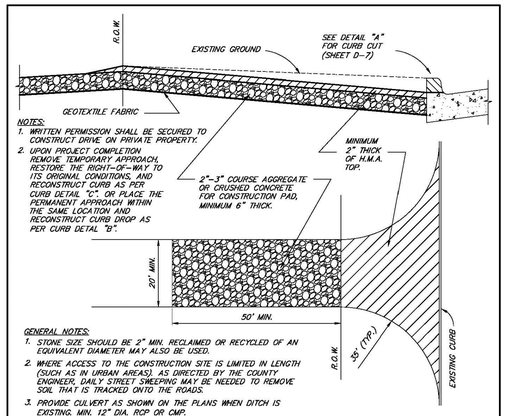
PARCEL 2: PARCEL #83-054-99-0013-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING NORTH 89 DEGREES 00 MINUTES EAST 398 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 150 FEET; THENCE NORTH 258 FEET TO THE POINT OF BEGINNING. 0.89 ACRES.

PARCEL 3: PARCEL #83-054-99-0014-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 60 FEET AND NORTH 89 DEGREES EAST 60 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE SOUTH 123 FEET; THENCE NORTH 89 DEGREES EAST 188 FEET; THENCE NORTH 123 FEET; THENCE SOUTH 89 DEGREES WEST 188 FEET TO THE POINT OF BEGINNING. 0.53 ACRES.

PARCEL 4: PARCEL #83-054-99-0015-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 183 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE SOUTH 150 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 248 FEET; THENCE NORTH 150 FEET TO THE POINT OF BEGINNING EXCEPT THE WEST 60 FEET THEREOF. 0.65 ACRES.

PARCEL 5: PARCEL #83-054-99-0016-002
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 232 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 176 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 176 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.48 ACRES.

PARCEL 6: PARCEL #83-054-99-0016-003
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 408 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 140 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 140 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING



NOTES:
1. WRITTEN PERMISSION SHALL BE SECURED TO CONSTRUCT DRIVE ON PRIVATE PROPERTY.
2. UPON PROJECT COMPLETION, REMOVE TEMPORARY APPROACH, RESTORE THE RIGHT-OF-WAY TO ITS ORIGINAL CONDITIONS, AND RECONSTRUCT CURB AS PER CURB DETAIL "C". OR PLACE THE PERMANENT APPROACH WITHIN THE SAME LOCATION AND RECONSTRUCT CURB DROP AS PER CURB DETAL "D".

GENERAL NOTES:
1. STONE SIZE SHOULD BE 2" MIN. RECLAIMED OR RECYCLED OF AN EQUIVALENT DIAMETER MAY ALSO BE USED.
2. WHERE ACCESS TO THE CONSTRUCTION SITE IS LIMITED IN LENGTH (SUCH AS IN URBAN AREAS), AS DIRECTED BY THE COUNTY ENGINEER, DAILY STREET SWEEPING MAY BE NEEDED TO REMOVE SOIL THAT IS TRACKED ONTO THE ROADS.
3. PROVIDE CULVERT AS SHOWN ON THE PLANS WHEN DITCH IS EXISTING. MIN. 12" DIA. RCP OR CMP.

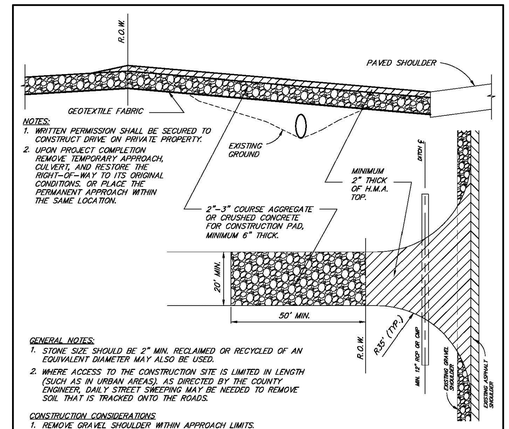
CONSTRUCTION CONSIDERATIONS
1. SAW-CUT HORIZONTALY THE EXISTING CONCRETE CURB AS PER WAYNE COUNTY DETAIL "A" AND PREPARE THE EDGE OF PAVEMENT.
2. REMOVE AND DISPOSE OF UNWANTED TREES, OTHER VEGETATION, OR FOREIGN OBJECTS AND DEBRIS FROM THE AREA.
3. APPLY THE STONE IN LAYERS AND COMPACT IT AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
4. PLACE H.M.A. TOP AND COMPACT IT TO ITS 97% OF THE UNIT WEIGHT OF THE MATERIALS OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.

AFTER CONSTRUCTION
IF MUD AND SOIL ATTACHED TO TRUCK TIRES DOES NOT FALL OFF ONTO THE ASPHALT, THEN TRUCK TIRES SHOULD BE WASHED ON AN AREA STABILIZED WITH CRUSHED STONE. WASH RACKS MAY BE USED.

MAINTENANCE
PROPER MAINTENANCE MAY INCLUDE ADDITIONAL LAYERS OF STONE OR H.M.A. WHEN THE ORIGINAL LAYERS BECOMES COVERED WITH MUD OR BECOMES COMPLETELY OR PARTIALLY DETERIORATED DUE TO MOVEMENT OF HEAVY TRUCKS AND VEHICLES. AFTER EACH STORM EVENT, INSPECT THE ROAD FOR DEBRIS AND ALL SEDIMENT DROPPED OR ERODED ONTO PUBLIC R.O.W. SHOULD BE REMOVED IMMEDIATELY BY SWEEPING EFFECTIVELY.

REVISION DATE:	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES	SCALE
	ENGINEERING DIVISION/PERMIT OFFICE	NOT TO SCALE
DIRECTOR OF ENGINEERING	PERMIT STANDARDS	CD-1
DIVISION PERMIT ENGINEER	TEMPORARY ASPHALT ACCESS DRIVE	SHEET 1 OF 2

NOTE: THIS IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL SIGNED COPY FOR PUBLICATION IS KEPT ON FILE AT THE WAYNE COUNTY ENGINEERING OFFICES.



NOTES:
1. WRITTEN PERMISSION SHALL BE SECURED TO CONSTRUCT DRIVE ON PRIVATE PROPERTY.
2. UPON PROJECT COMPLETION, REMOVE TEMPORARY APPROACH, CULVERT, AND RESTORE THE RIGHT-OF-WAY TO ITS ORIGINAL CONDITIONS. OR PLACE THE PERMANENT APPROACH WITHIN THE SAME LOCATION.

GENERAL NOTES:
1. STONE SIZE SHOULD BE 2" MIN. RECLAIMED OR RECYCLED OF AN EQUIVALENT DIAMETER MAY ALSO BE USED.
2. WHERE ACCESS TO THE CONSTRUCTION SITE IS LIMITED IN LENGTH (SUCH AS IN URBAN AREAS), AS DIRECTED BY THE COUNTY ENGINEER, DAILY STREET SWEEPING MAY BE NEEDED TO REMOVE SOIL THAT IS TRACKED ONTO THE ROADS.

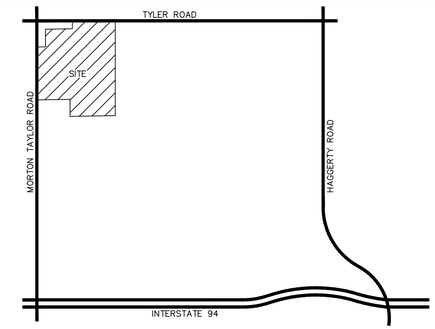
CONSTRUCTION CONSIDERATIONS
1. REMOVE GRAVEL SHOULDER WITHIN APPROACH LIMITS.
2. REMOVE AND DISPOSE OF UNWANTED TREES, OTHER VEGETATION, OR FOREIGN OBJECTS AND DEBRIS FROM THE AREA.
3. APPLY THE STONE IN LAYERS AND COMPACT IT AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
4. PLACE H.M.A. TOP AND COMPACT IT TO ITS 97% OF THE UNIT WEIGHT OF THE MATERIALS OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.

AFTER CONSTRUCTION
IF MUD AND SOIL ATTACHED TO TRUCK TIRES DOES NOT FALL OFF ONTO THE ASPHALT, THEN TRUCK TIRES SHOULD BE WASHED ON AN AREA STABILIZED WITH CRUSHED STONE. WASH RACKS MAY BE USED.

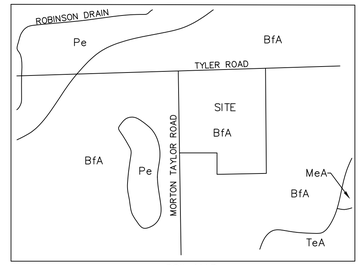
MAINTENANCE
PROPER MAINTENANCE MAY INCLUDE ADDITIONAL LAYERS OF STONE OR H.M.A. WHEN THE ORIGINAL LAYERS BECOMES COVERED WITH MUD OR BECOMES COMPLETELY OR PARTIALLY DETERIORATED DUE TO MOVEMENT OF HEAVY TRUCKS AND VEHICLES. AFTER EACH STORM EVENT, INSPECT THE ROAD FOR DEBRIS AND ALL SEDIMENT DROPPED OR ERODED ONTO PUBLIC R.O.W. SHOULD BE REMOVED IMMEDIATELY BY SWEEPING EFFECTIVELY.

REVISION DATE:	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES	SCALE
	ENGINEERING DIVISION/PERMIT OFFICE	NOT TO SCALE
DIRECTOR OF ENGINEERING	PERMIT STANDARDS	CD-1
DIVISION PERMIT ENGINEER	TEMPORARY ASPHALT ACCESS DRIVE	SHEET 2 OF 2

NOTE: THIS IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL SIGNED COPY FOR PUBLICATION IS KEPT ON FILE AT THE WAYNE COUNTY ENGINEERING OFFICES.

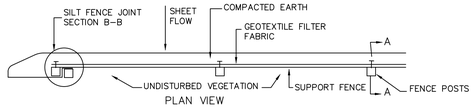


LOCATION MAP
SCALE: 4"=1 MILE

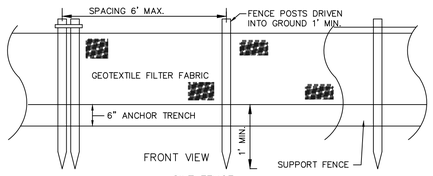


SOIL MAP
NO SCALE

SOIL TYPES
SOIL SURVEY OF WAYNE COUNTY, MICHIGAN
BfA: BLOUNT LOAM, ERIE-HURON LAKE PLAIN, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP D
MeA : METAMORA SANDY LOAM, 0 TO 3 PERCENT SLOPES, HYDROLOGIC SOIL GROUP C/D
Pe: PEWAMO LOAM, HYDROLOGIC SOIL GROUP C/D
TeA: TEDROW LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP A/D

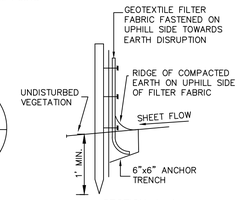


PLAN VIEW

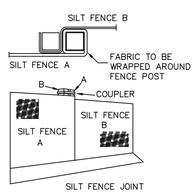


FRONT VIEW

SILT FENCE
NO SCALE

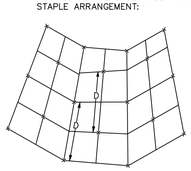


SECTION A-A
NO SCALE



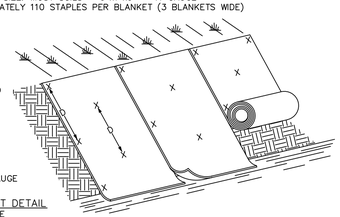
SECTION B-B
NO SCALE

INSTALLATION INSTRUCTIONS
1. REMOVE PROTECTIVE OUTER WRAPPER.
2. START UNROLLING BLANKET AS INDICATED BY SEPARATOR APPEARING AT THE BEGINNING OF EACH ROLL.
3. BE SURE THAT NETTING IS ON TOP OF THE EXCELSIOR FIBER AND THE EXCELSIOR IS IN DIRECT CONTACT WITH THE SOIL AND REMAINS SP CONTINUOUSLY WHILE UNROLLING.
4. STAPLE BLANKETS SECURELY ACCORDING TO THE FOLLOWING STAPLE ARRANGEMENT:

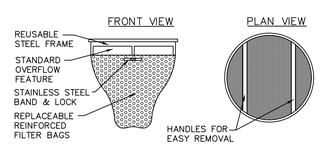


CHANNEL INSTALLATION
THE BLANKET SHOULD BE ROLLED OUT ALONG THE CHANNEL BOTTOM AND SIDE SLOPES IN THE DIRECTION OF THE WATER FLOW. ADJACENT BLANKETS SHOULD BE CLOSELY BUTTED OR SLIGHTLY OVERLAPPED SO THAT ONE ROW OF STAPLES WILL FASTEN BOTH EDGES ALONG THE SEAM. A ROW OF STAPLES SHOULD BE CENTERED DOWN THE BLANKET LOCATED IN BETWEEN THE STAPLES AT THE BLANKETS EDGE.
WHEN COMING TO THE END OF A ROLL, OVERLAP THE BEGINNING OF THE NEXT ROLL BY AT LEAST 6 INCHES.
STAPLE SPACING: (D) = 4 FEET
STAPLE SIZE: MOST SOILS - 6"x1"x6" - 11 GAUGE
APPROXIMATELY 110 STAPLES PER BLANKET (3 BLANKETS WIDE)

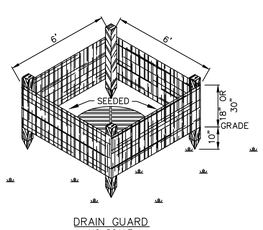
SLOPE INSTALLATION
ON SHORT BANKS THE BLANKET MAY BE ROLLED OUT HORIZONTALLY OR VERTICALLY, WHICHEVER IS MORE CONVENIENT. HOWEVER, ON LONG AND STEEP BANKS, IT IS RECOMMENDED THAT THE BLANKET BE ROLLED DOWN SLOPE VERTICALLY, SO THAT IT CAN CONTRIBUTE TO THE RESTRAINT OF "SLOUGHING".
IN A MANNER SIMILAR TO THE METHODS USED IN THE CHANNEL PROCEDURES, FASTEN THE BLANKETS SECURELY WITH APPROPRIATE SIZED STAPLES AND INDICATED STAPLING ARRAY.
STAPLE SPACING: (D) = 5 FEET
STAPLE SIZE: MOST SOILS - 6"x1"x6" - 11 GAUGE
APPROXIMATELY 80 STAPLE PER BLANKET



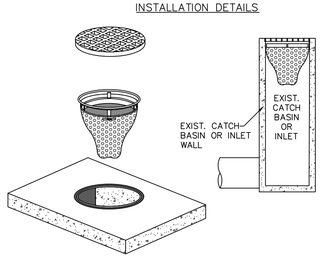
MULCH BLANKET DETAIL
NO SCALE



INSTALLATION DETAILS



DRAIN GUARD
NO SCALE



SILT SACK INLET PROTECTOR

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLING. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

WAYNE COUNTY R19-949 PLAN REVIEW

Revisions:
09-16-20 REV PER WCDPS L.A. 04-01-21 REV PER WCDPS L.A. 05-19-21 REV PER OHM FOR WCDPS L.A.

Client:
SYED IMRAN LAND HOLDING LLC ZOHAIB SYED 1451 S. GRATIOT AVENUE CLINTON TOWNSHIP, MI 48035 989-708-1878 zohaibsyed2001@yahoo.com

Lehner Associates, Inc.
Civil Engineers | Surveying | Planning | Consulting
Serving Michigan Since 1912
17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

HAMPTON MANOR
OF VAN BUREN TOWNSHIP
SOIL EROSION AND SEDIMENTATION CONTROL - NOTES AND DETAILS
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	1"=40'
Paper Size:	24"x36"
Date:	11-06-19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19-249
Sheet No.	33

F:\19\19-249\Drafting & Engineering\Engineering\19-249-32-33-SoilErosion.dwg, 33-Soil Dist, 5/19/2021 11:05:20 AM, laura.ambros

landscape requirements:

road frontage landscape

TLYER ROAD R.O.W LIN FT. 458'
(458'-30' WIDE DRIVE = 428' ROAD FRONTAGE)

	REQUIRED	PROVIDED
ONE (1) 3" DECIDUOUS OR EVERGREEN TREE PER 40' OF ROAD FRONTAGE (458' / 40' = 11.45 TREES)	11	12
ONE (1) ORNAMENTAL TREE PER 100' OF ROAD FRONTAGE (458' / 100' = 4.5 TREES)	5	5
EIGHT (8) SHRUBS PER 40' OF ROAD FRONTAGE (458' / 40' = 11.45 X 8= 91.6 SHRUBS)	92	100+

MORTON TAYLOR ROAD R.O.W LIN FT. 443'
(443'-28' WIDE DRIVE = 465' ROAD FRONTAGE)

	REQUIRED	PROVIDED
ONE (1) 3" DECIDUOUS OR EVERGREEN TREE PER 40' OF ROAD FRONTAGE (465' / 40' = 11.6 TREES)	12	12
ONE (1) ORNAMENTAL TREE PER 100' OF ROAD FRONTAGE (465' / 100' = 4.6 TREES).	5	5
EIGHT (8) SHRUBS PER 40' OF ROAD FRONTAGE (465' / 40' = 11.6 X 8=93 SHRUBS)	93	100+

parking lot landscaping

TOTAL PAVEMENT AREA PROVIDED 117,538 S.F.

	REQUIRED	PROVIDED
INTERIOR PARKING LANDSCAPING =15% PAVEMENT AREA (117,538 S.F. X .15 (15%) = 17,630.7 S.F.)	17,631 S.F.	17,631 S.F.
ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 300 S.F. OF INTERIOR LANDSCAPE AREA (17,631 S.F. / 300 =58.77 TREES)	59	59

greenbelt buffering

TOTAL LIN FT. OF EAST PROPERTY LINE 612'

	REQUIRED	PROVIDED
ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 20' (612 / 20' PER TREE =30.6 TREES)	31	28 +4 EX.TREES

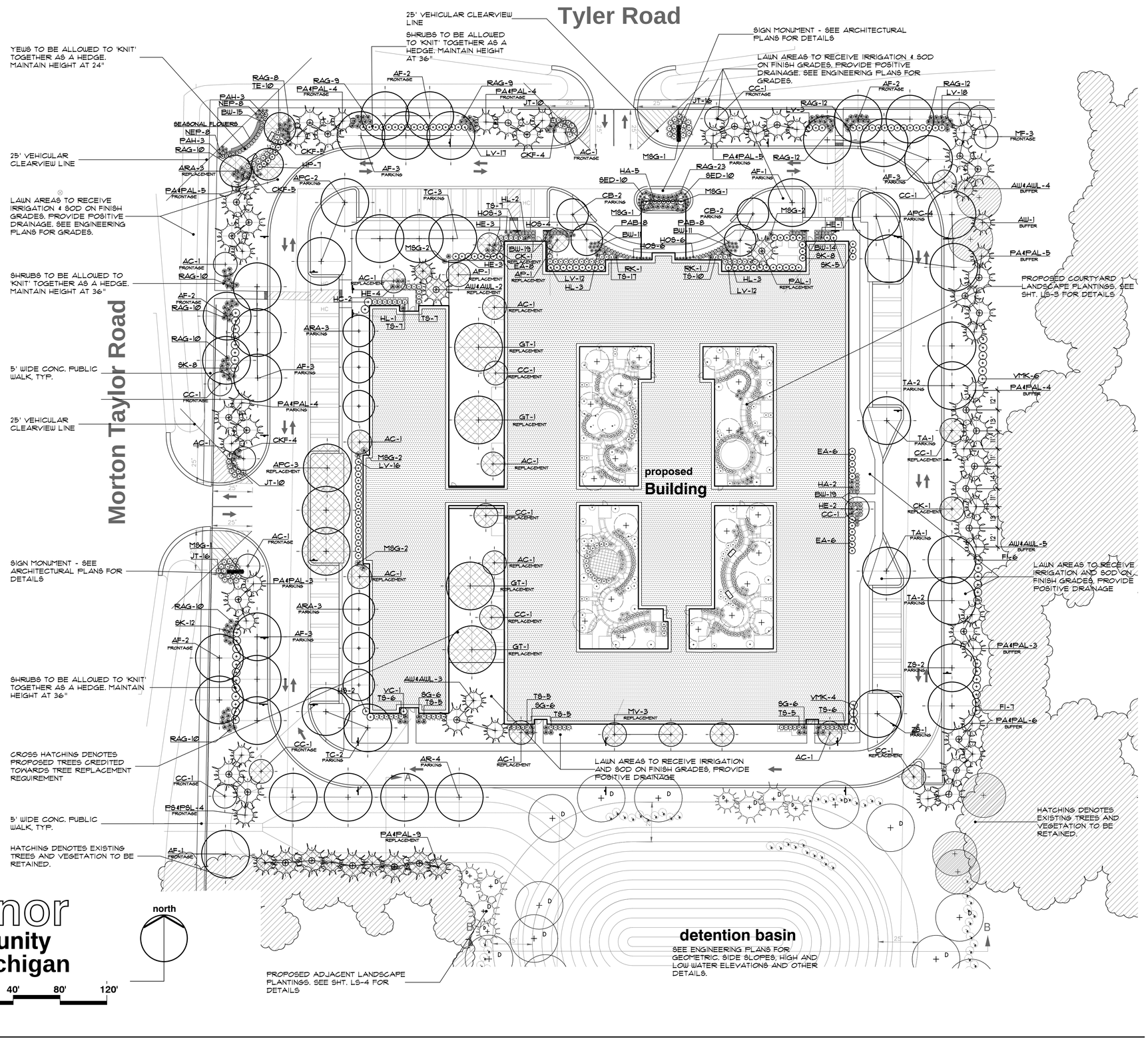
TOTAL LIN FT. OF SOUTH PROPERTY LINE 607'

ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 20' (607 / 20' PER TREE =30.35 TREES)	30	31

tree removal/replacement summary

TOTAL NO. TREES INVENTORIED 249
(245-TREES ONSITE AND 4-TREES OFFSITE)
TOTAL NO. OF TREES SAVED 38
NO. OF REGULATED TREES SAVED 38
NO. OF NON-REGULATED TREES SAVED 0
TOTAL NO. OF TREES REMOVED 207
NO. OF REGULATED TREES REMOVED 97
NO. OF NON-REGULATED TREES REMOVED 110

TOTAL NO. OF REPLACEMENT TREES REQUIRED 97
TOTAL NO. OF REPLACEMENT TREES PROVIDED 985
7- 8' HIGH EVERGREEN TREE EQUAL 2-REP. TREE 14
9- 10' HIGH EVERGREEN TREE EQUAL 2.5-REP. TREE 22.5
44- 2" DECIDUOS TREE EQUAL 1-REP. TREE 44
18- 3" DECIDUOS TREE EQUAL 1-REP. TREE 18



landscape plan for:

Hampton Manor

Senior Living Community

Van Buren Township, Michigan

FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, Suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416

seal:

STATE OF MICHIGAN — FELINO A. PASCUAL — LANDSCAPE ARCHITECT — No. 1433 — REGISTERED LANDSCAPE ARCHITECT

client:

S & S HOLDING, LLC
1451 Gratiot Avenue
Clinton Township,
Michigan 48036

project:

HAMPTON MANOR of VAN BUREN TOWNSHIP

project location:
Van Buren Township , Michigan
Morton Taylor Road & Tyler Road

sheet title:

LANDSCAPE PLAN

job no./issue/revision date:

LS 19.123.11 SPA 11-5-2019
LS 19.123.11 SPA 11-26-2019
LS 20.015.01 SPA 2-2-2020

drawn by: JP, DK
checked by: FP
date: 10-26-2019

notice:

Copyright © 2019
This document and the subject matter contained therein is proprietary and is not to be used or reproduced without the written permission of Felino Pascual and Associates
Do Not scale drawings. Use figured dimensions only

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171
For free location of public utility lines

The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no: LS19.123.10

sheet no: **LS-1** of 4

plant material list

key	quant.	botanical name	common name	size	comments	required
		LARGE AND SMALL DECIDUOUS TREES				
AR	4	ACER RUBRUM	RED MAPLE (MULTI-STEM)	3" BB		
AF	22	ACER X FREEMANII 'JEFFERSRED'	AUTUMN BLAZE RED MAPLE	3" BB		
TC	5	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	3" BB		
CB	4	CARPINUS BETULUS 'FASTIGIATA'	PYRAMIDAL EUROPENAN HORNBEAN	4" BB		
ZS	3	ZELKOVA SERRATE 'VILLAGE GREEN'	VILLAGE GREEN ZELKOVA	3" BB		
GT	4	GLEDITSIA TRI. INERMIS 'SKYCOLE'	SKYLINE LOCUST	3" BB		4 RT
APC	9	ACER P. 'CRIMSON KING'	CRIMSON KING NORWAY MAPLE	3" BB		3 RT
TA	6	TILIA AMERICANA	AMERICAN LIDEN	3" BB		3 RT
ARA	9	ACER R. 'ARMSTRONG'	ARMSTRONG RED MAPLE	3" BB		3 RT
AP	2	ACER P. 'BLOODGOOD'	BLOODGOOD LACE LEAF MAPLE	6' BB		2 RT
MF	3	MALUS FLORIBUNDA	JAPANESE FLOWERING CRABAPPLE	2" BB		
AC	12	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	10' BB	(MULTI-STEM)	1 RT
CC	11	CERCIS CANADENSIS	EASTERN REDBUD	10' BB	(MULTI-STEM)	8 RT
CK	2	CORNUS KOUSA	KOUSA DOGWOOD	2" BB		2 RT
MV	3	MALUS'RED BARON'	RED BARON CRABAPPLE	2" BB		3 RT
		SHRUBS				
SK	33	SYRINGA PATULA 'MISS KIM'	MISS KIM DWARF LILAC	3' B.B.		
LV	78	LIGUSTRUM VULGARE 'LODENSE'	LODENSE PRIVET 42" O.C. SPACING	3' BB		
VMK	10	VIBURNUM X.B. 'MOHAWK'	MOHAWK VIBURNUM	3' BB		
RK	2	ROSA X. 'OSA EASY DOUBLE RED''	OSA EASY DOUBLE RED ROSE	#5 CONT.		
HA	7	HYDRANGEA ANNEBELLE	ANNABELLE HYDRANGEA	#5 CONT.		
HE	13	HYDRANGEA M. 'GLOWING EMBERS'	GLOWING EMBERS HYDRANGEA	#5 CONT.		
HL	9	HYDRANGEA 'LINDSEY ANN'	LA DREAMIN HYDRANGEA	#5 CONT.		
SG	18	SPIREA B. 'GOLD FLAME'	GOLD FLAME SPIREA	#3 CONT.		
EA	20	EUONYMUS ALATUS 'COMPACTUS'	DWARF WING BURNING BUSH	3' BB		
VC	3	VIBURNUM X.B. 'CARLES11'	KOREAN SPICE	3' 1/2' BB		
FI	13	FORSYTHIA X INTERMEDIA	BORDER FORSYTHIA	#3 CONT.		
HP	7	HYDRANGEA PANICULATA	HYDRANGEA LITTLE LIME	#3 CONT.		
HS	2	HIBISCUS SYRIACUS	APHRODITE	#3 CONT.		
		LARGE AND SMALL EVERGREENS				
TS	80	TAXUS X M. 'SEBIAN'	SEBIAN YEW	18" BB	24" O.C. SPACING	
TE	10	TAXUS XM. 'EVERLOW'	EVERLOW YEW	24"-30" BB	32" O.C. SPACING	
BW	88	BUXUS S 'GREEN VELVET	GREEN VELVET BOXWOOD	18" BB	32" O.C. SPACING	
JT	42	JUNIPERUS SABINE'TAMARISCIFOLIA'	TAM JUNIPER	18" BB	32" O.C. SPACING	
AW	8	ABIES CONCOLOR	CONCOLOR WHITE FIR	8' BB		6 BT
AWL	7	ABIES CONCOLOR	CONCOLOR WHITE FIR	10' BB O		4 BT
PA	26	PICEA ABIES	NORWAY SPRUCE	8' BB		9 BT
PAL	27	PICEA ABIES	NORWAY SPRUCE	10' BB O		9 BT 1 RT
PS	2	PINUS STROBUS	WHITE PINE	8' BB		- BT
PSL	2	PINUS STROBUS	WHITE PINE	10' BB O		- BT
		PERENNIALS AND GRASSES				
PAH	6	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	#3 CONT.		
CKF	14	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#3 CONT.		
MSG	12	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	#3 CONT.		
NEP	16	NEPATA X.F. 'WALKER'S LOW'	WALKER'S LOW CATMINT	#1 CONT.		
RAG	145	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3 CONT.		
SED	20	SEDUM SPECTABILE 'NEON'	NEON SEDUM	#1 CONT.		
HOS	19	HOSTA	REGAL HOSTA	#1 CONT.		
PAB	16	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#3 CONT.		

Required Legend
Buffer = BT
Replacement = RT

general landscape notes:

1. LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISITNG CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK. CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.

2. PRIOR TO BEGINING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES, GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING

3. NUMERICAL VALUE ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEEDENCE OVER GRAPHIC REPRESENTATION. VERIFY ANY CONCERN-DISCREPANCY WITH LANDSCAPE ARCHITECT.

4. ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE IF NECESSARY

5. ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY VAN BUREN TOUNSHIP AND LANDSCAPE ARCHITECT.

6. ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAIL SHOWN ON PLAN.

7. PLANT BEDS TO BE DRESSED WITH MIN. 4" OF FINELY DOUBLE SHREDDED HARDBARK MULCH.

8. DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.

9. NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS.

10. REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS. 4" THICK BARK MULCH FOR TREES IN 4' DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 4" THICK BARK MULCH FOR SHRUBS AND 4" THICK BARK MULCH FOR PERENNIALS.

11. PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.

12. PROVIDE PEAT SOD FOR ALL NEW AND DISTURBED LAWN AREAS UNLESS NOTED OTHERWISE.

13. ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.

14. PLANT TREES AND SHRUBS GENERALLY NO CLOSER THEN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS:
   a). SHADE TREES _____ 5 FT.
   b). ORNAMENTAL AND EVERGREEN TREES (CRAB, PINE, SPRUCE, ETC.) _____ 10 FT.
   c). SHRUBS THAT ARE LESS THAN 1 FOOT TALL AND WIDE AT MATURITY _____ 2 FT.

15. NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS.

16. ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH A AUTOMATIC UNDERGROUND SYSTEMS. IRRIGATION SYSTEM TO HAVE SEPARTE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL MOISTURE LEVEL ADJUSTMENT PER ZONE AS REQUIRED

17. UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO RECIEVE EDGING. EDGING SHALL BE 4" X 1/8" METAL (FINISH BLACK OR GREEN) OR APPROVED EQUAL AND TO BE INSTALLED WITH HORIZONTAL METAL STAKES AT 32" O.C. OR PER MANUFACTERER'S SPECIFICATION.

18. ALL NEW PARKING ISLANDS AND LANDSCAPE BEDS ADJACENT AND NEXT TO BUILDING SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS A MIN. OF 12"-16" DEPTH. BACK FILL WITH GOOD, MEDIUM TEXTURED PLANTING SOILS. ADD A MIN. 4" OF TOPSOIL OVERFILL TO FINISH GRADE. PROVIDE POSITIVE DRAINAGE.

19. WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND MULCHING WITHIN 24 HOURS AFTER INSTALLATION.

20. ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPERATES DRAINAGE SYSTEM AS REQUIRED IF THE TREE PIT DOES NOT DRAIN SUFFICIENTLY.

21. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEAR BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLTION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE TOWNSHIP OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.

landscape maintenance notes:

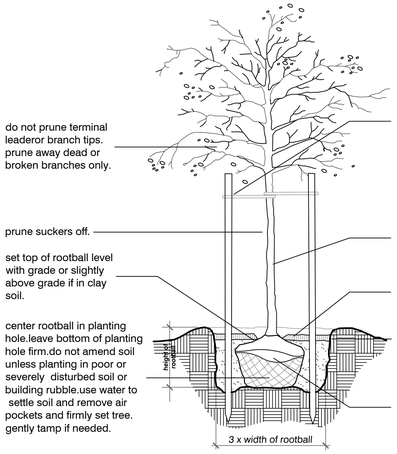
LANDSCAPE MAINTENANCE PROCEDURES AND FREQUENCIES TO BE FOLLOWED SHALL BE SPECIFIED ON THE LANDSCAPE PLAN, ALONG WITH THE MANNER IN WHICH THE EFFECTIVENESS, HEALTH AND INTENDED FUNCTIONS OF THE VARIOUS LANDSCAPE AREAS ON THE SITE WILL BE ENSURED.

1. LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.

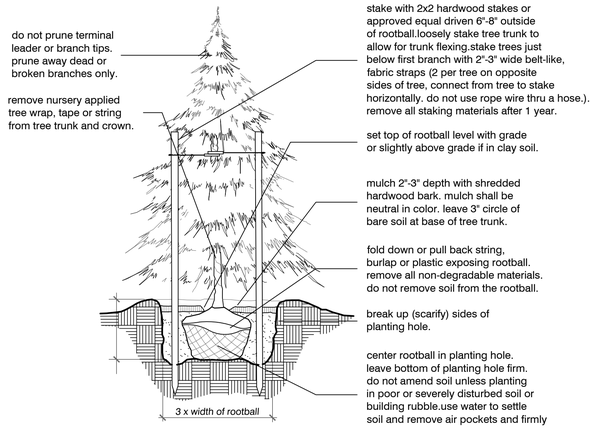
2. PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.

3. ALL DEAD OR DISEASED PLANT MATERIAL SHALL BE REMOVED AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH 15 AND NOVEMBER 15 OR UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE.

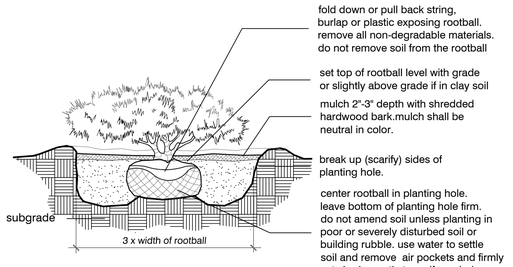
4. THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN ACCORDANCE WITH THE AFOREMENTIONED PROCEDURES, ANY REVISIONS TO, OR REMOVAL OF, PLANT MATERIALS WILL PLACE THE PARCEL IN NON-CONFORMITY WITH THE APPROVED LANDSCAPE PLAN, AND SHALL BE VIEW AS A VIOLATION OF THIS ORDINANCE AND THE AGREED UPON TERMS OF THE FINAL SITE PLAN APPROVAL.



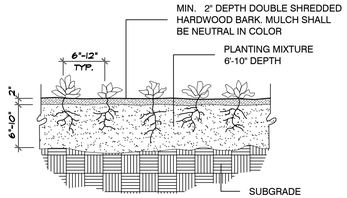
tree planting detail
no scale



evergreen planting detail
no scale



shrub planting detail
no scale



perennial planting detail
no scale

FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416

seal:
STATE OF MICHIGAN FELINO A. PASCUAL LANDSCAPE ARCHITECT No. 1433 REGISTERED LANDSCAPE ARCHITECT

client:
S & S HOLDING, LLC
1451 Gratiot Avenue
Clinton Township, Michigan 48036

project:
HAMPTON MANOR of VAN BUREN TOWNSHIP

project location:
Van Buren Township , Michigan
Morton Taylor Road & Tyler Road

sheet title:
plant material list, planting details and landscape notes

job no./issue/revision date:
LS 19.123.11 SPA 11-5-2019
LS 19.123.11 SPA 11-26-2019
LS 20.015.01 SPA 2-2-2020

drawn by:
JP, DK
checked by:
FP
date:
10-26-2019

notice:

Copyright © 2019
This document and the subject matter contained therein is proprietary and is not to be used or reproduced without the written permission of Felino Pascual and Associates
Do Not scale drawings. Use figured dimensions only

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 for free location of public utility lines

The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no:
LS19.123.10

sheet no:
LS-2 of 4

plant material list

key	quant. 3A	quant. 3B	quant. 3C	quant. 3D	botanical name	common name	size	comments
					SMALL ORNAMENTAL TREES			
AP	1	1	1	2	ACER P. 'BLOODGOOD'	BLOODGOOD LACE LEAF MAPLE	6' BB	
AC	2	1	2	3	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	10' BB	(MULTI-STEM)
CP	-	-	-	-	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN	10' BB	(MULTI-STEM)
CC	-	1	-	-	CERCIS CANADENSIS	EASTERN REDBUD	10' BB	(MULTI-STEM)
CK	2	1	1	-	CORNUS KOUSA	KOUSA DOGWOOD	2" BB	
MJ	1	1	1	2	MAGNOLIA LILLIFLORA 'JANE'	JANE MAGNOLIA	10' BB	(MULTI-STEM)
					SHRUBS			
HE	5	5	5	9	HYDRANGEA M. 'GLOWING EMBERS'	GLOWING EMBERS HYDRANGEA	#3 CONT.	
HA	11	3	5	7	HYDRANGEA ANNEBELLE	ANNABELLE HYDRANGEA	#3 CONT.	
TS	9	-	11	-	TAXUS XM. 'SEBIAN'	EVERLOW SEBIAN	24"-30" BB	32" O.C. SPACING
AZ	-	-	-	-	AZALEA 'STEWARTSTONIAN'	STEWARTSTONIAN AZALEA	#3 CONT.	
VC	2	2	1	3	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	3 1/2' BB	
VMK	1	-	3	2	VIBURNUM X.B 'MOHAWK	MOHAWK VIBURNUM	3 1/2' BB	
HL	2	2	-	3	HYDRANGEA 'LINDSEY ANN'	LA DREAMIN HYDRANGEA	#3 CONT.	
WF	4	-	6	2	WEIGLA FLORIDA 'ALEXANDRA'	WINE & ROSES WEIGELA	2'-2 1/2' BB	
BW	48	60	41	58	BUXSUS M. 'GREEN VELVET'	GREEN VELVET BOXWOOD	18" BB	24" O.C. SPACING
SG	6	11	8	-	SPIRAEA X.B. BUMALDA 'GOLDFLAME'	GOLDFLAME SPIREA	#3 CONT	36" O.C. SPACING
SK	4	6	2	-	SYRINGA PATULA 'MISS KIM'	MISS KIM DWARF LILAC	3' B.B.	
RK	3	11	5	5	ROSA X. 'O6A EASY DOUBLE RED'	O6A EASY DOUBLE RED ROSE	#5 CONT.	
					PERENNIALS AND GRASSES			
PAH	6	8	6	8	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	#3 CONT.	
MSG	1	1	1	-	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	#3 CONT.	

A decorative planter urn

(9-CONDITIONS)
MANUFACTURER:
HADDONSTONE LTD. 32207 UNITED AVE.
PUEBLO, CO 81001
WEB:WWW.HADDONSTONE.COM
PH. 866-733-8225
MODEL:
STONE PLANTER URNS
PER OWNER SELECTIONS

B outdoor wicker lounge chairs

(1-CONDITIONS)
DESCRIPTION:
5-PIECE RESIN WICKER PATIO FURNITURE
WITH CUSHION
FINISH SELECTION BY OWNER

C outdoor wicker table / chairs

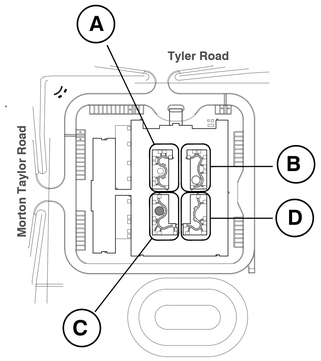
(4-CONDITIONS)
DESCRIPTION:
RESIN WICKER CHAIRS AND TEMPERED
ROUND TABLE WITH CUSHION
FINISH SELECTION BY OWNER

D concrete walk or patio

BROOM FINISH WITH 4" WITH TROWEL
SMOOTH EDGE

E bench seat

(4-CONDITIONS)
MANUFACTURER:
ANOVA, INC. OR EQUAL
211 NORTH LINDBERGH BLVD. SUITE 200
ST. LOUIS, MISSOURI 63141-1809
TOLL FREE NO. (800)231-1321
WWW.ANOVAFURNISHINGS.COM
MODEL NO. LEXC6 or EQUAL
DESCRIPTION: 6' WIDE CONTOUR BENCH
FINISH: TEXTURE PEWTER

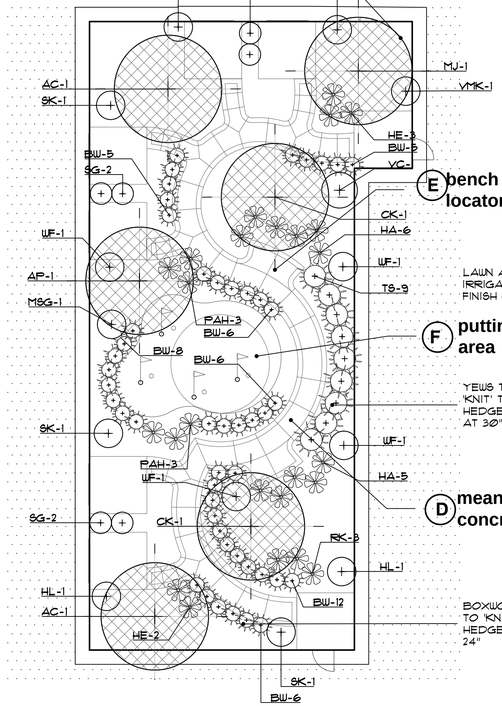


key reference location map

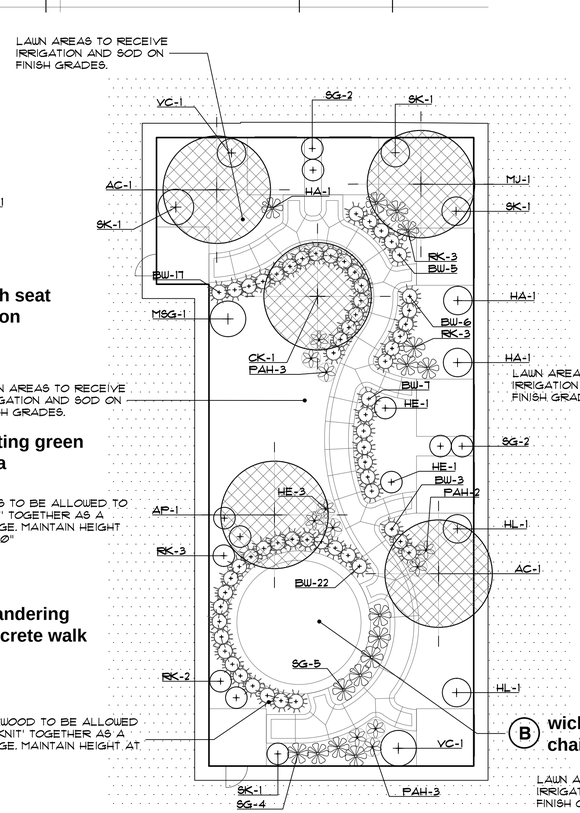
NO SCALE

F artificial grass mini putting green

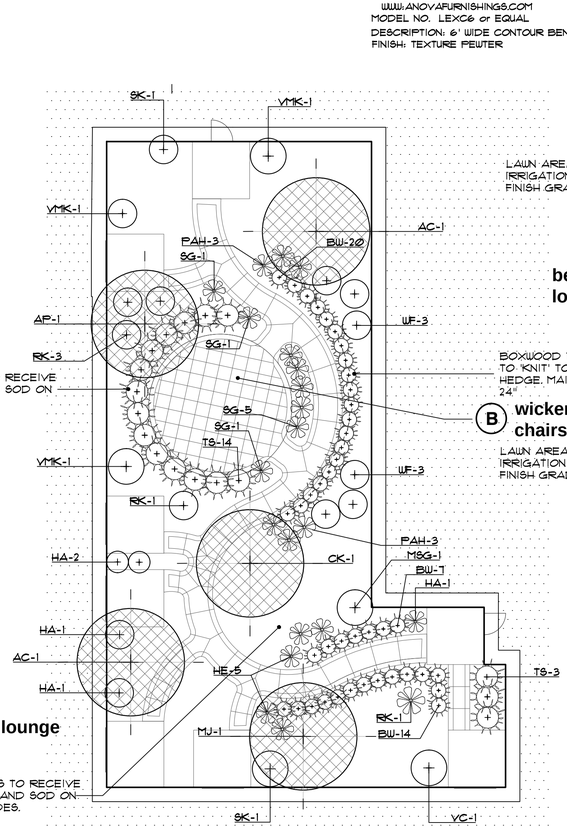
(1-CONDITIONS)



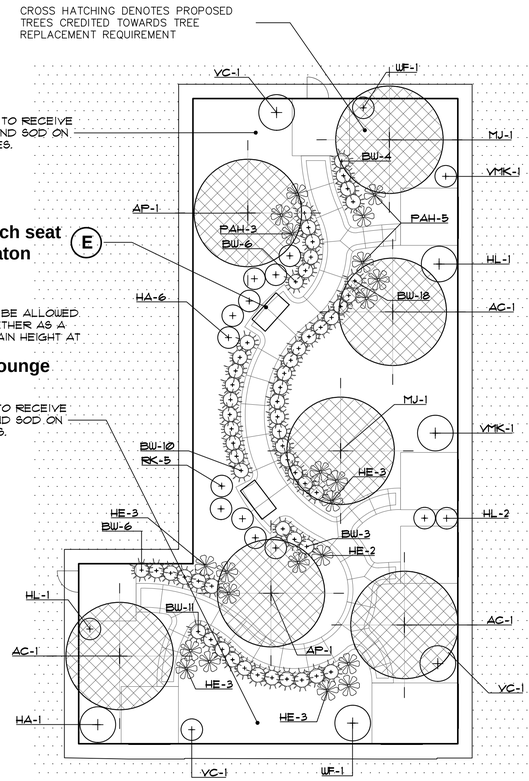
3A courtyard planting detail
SCALE: 1"= 10'-0"



3B courtyard planting detail
SCALE: 1"= 10'-0"



3C courtyard planting detail
SCALE: 1"= 10'-0"



3D courtyard planting detail
SCALE: 1"= 10'-0"

FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, Suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416

seal:

STATE OF MICHIGAN
FELINO A. PASCUAL
LANDSCAPE ARCHITECT
No. 4433

client:

S & S HOLDING, LLC
1451 Gratiot Avenue
Clinton Township,
Michigan 48036

project:

HAMPTON MANOR of VAN BUREN TOWNSHIP

project location:
Van Buren Township , Michigan
Morton Taylor Road & Tyler Road

sheet title:

COURTYARD LANDSCAPE PLANTING DETAIL

job no./issue/revision date:

LS 19.123.11 SPA 11-5-2019
LS 19.123.11 SPA 11-26-2019
LS 20.015.01 SPA 2-2-2020

drawn by: JP, DK
checked by: FP
date: 10-26-2019

notice:

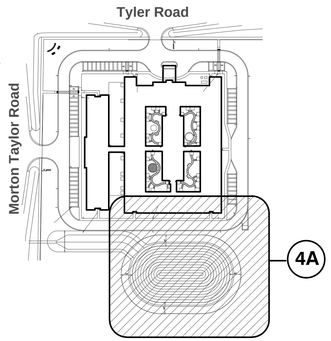
Copyright © 2019
This document and the subject matter contained therein is proprietary and is not to be used or reproduced without the written permission of Felino Pascual and Associates
Do Not scale drawings. Use figured dimensions only

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171
For free location of public utility lines

The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no: LS19.123.10

sheet no: LS-3 of 4



reference location map

NO SCALE

basin vegetation notes

A landscaping plan is required for open detention basins, due to the importance of the vegetation to the function on of the entire system. Vegetation should be specified for each zone within the detention basin as follows:

Pond zone (permanent water depths from 0 to 3 ft deep):Vegetation in the pond zone is entirely or partially submerged and should consist of a combination of native plant plugs and bare-root stock.

Edge zone (permanent water elevation to bank full elevation). Vegetation in the edge zone must withstand periods of inundation and drought. This vegetation also stabilizes the side slopes of the facility.

Upland zone (bank full elevation to 100-year flood elevation and beyond): Vegetation in the upland zone may have little or no inundation by storm water, and must withstand periods of drought. This vegetation also stabilizes the side slopes of the system. Note that the buffer strip lies within the upland zone.

basin construction notes

1. Proper construction techniques, particularly installation of vegetation, are important to the successful functioning of open detention basins, especially for constructed wetland type open detention basins in order to establish a dense and diverse emergent wetland plant community. General guidelines for vegetation installation include:

2. If emergent plant stock is proposed in the pond zone, the supplied plug material must have sufficient vegetative growth extending out of the water once planted.

3. Seed must be planted above the permanent water elevation.

4. All seeded areas to be properly stabilized with a much blanket pegged in place.

5. Additional guidance on seed and sod specifications and installation is provided in Section 8.5.1 of this manual.

6. Depending on the type of vegetation, barriers may be required for one year to protect the plantings (e.g., snow fence or netting to deter wildlife, prevent mowing).

7. If detention basin are compacted, the slopes must be rototilled. 4" (four) of compost or topsoil must be added

8. If detention basin are compacted, the slopes must be rototilled. 4" (four) of compost or topsoil must be added

9. "No mow zone" signs must be placed around the basin

10. Detention basin native seeding to be performed in early spring or late fall. aquatic plants should be installed in the summer after the cover crop has established

basin maintenance notes

A. Maintenance activities for open detention basins are listed below. These activities must be identified in the maintenance plan that the applicant must submit with an application for storm water construction approval. Additionally, provision for maintenance access should be shown on the plan; it is recommended that the maintenance access to the storm water management system be a minimum of 15-feet wide. The landscape plan should be designed to prevent obstruction of the access by trees and shrubs.

B. Inspect and clean the storm sewer system and catch basins upstream from the detention basin (every five years or as needed).

C. Inspect for sediment accumulation at the inlet pipes and remove sediment which may be impeding flow (semiannually and after rain events).

D. Inspect inlets, outlets, and appurtenances (e.g., grates) annually for structural integrity.

E. Check the outlets regularly for clogging and clean when necessary, especially after large storm events.

F. Inspect the stone around riser-type outlet structures semiannually and after rain events. If stone has accumulated sediment, vegetation and/or debris to an extent that water is not flowing through the stone and out of the pond as originally designed, then the stone should be replaced.

G. Check for floatables and debris and remove as necessary.

H. Remove dead vegetation that obstructs flow (early spring).

I. Check banks and bottom for erosion and correct as necessary (annually).

J. Remove sediment when accumulation reaches six to twelve inches or if resuspension is observed

K. Reseed banks near inlet/outlet and stabilize eroded banks as necessary.

L. Ensure that no mowing, chemical application, or construction has occurred in the buffer strip (annually).

M. Inspect detention basin and buffer strip zone for invasive species such as purple loosestrife, phragmites, buckthorn (common & glossy), honeysuckle and autumn olive that out-compete native vegetation (annually - July).

N. Have a professional selectively remove invasive species (annually, July-August). Purple loosestrife flower heads can be clipped off to reduce seed production until plant removal may be achieved. If woody debris is cut, the cut should be four inches above the ground surface and the stumps should be treated with herbicide immediately after cutting. Monitor for sucker growth.

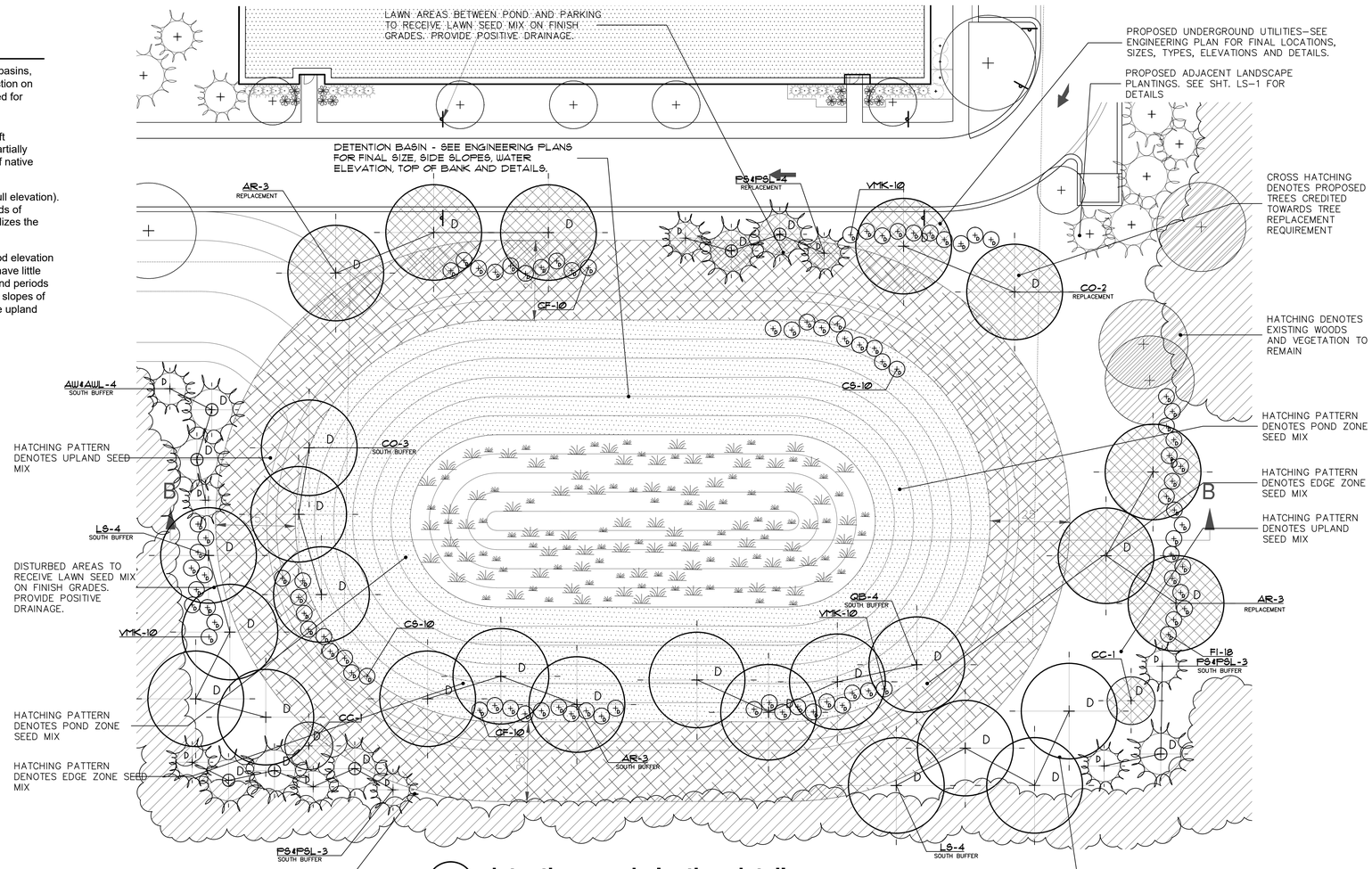
O. Planting must be monitored for two years after establishment. Replacement will be necessary as determined by the agency having jurisdiction over the system.

P. During the first two growing seasons, all areas planted with native prairie seed mix should be mowed three times at a height of 6-8 inches in order to control weeds. Beginning in the third year, a burning or mowing regimen should be instituted, either burning or mowing once in spring, or once in the fall.

THE PROPOSED VARIETIES AND QUANTITIES OF SEEDS AND PLANTING MATERIALS FOR THE FOREBAYS-DETENTION BASIN SYSTEM MEET OR EXCEED THE MINIMUM REQUIREMENTS IN CHAPTER 8 OF THE "WAYNE COUNTY STORM WATER ORDINANCE"

plant material list

key	quant.	botanical name	common name	size	comments
		LARGE AND SMALL DECIDUOUS TREES			
QB	4	QUERCUS 'BICOLOR'	SWAMP WHITE OAK	3" BB	
AR	9	ACER R. 'FRANKSRED'	RED SUNSET RED MAPLE	14' BB	MULTI-STEM 4-CANES
CO	5	CELTIS OCCIDENTALIS	HACKBERRY TREE	3" BB	
LS	8	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	3" BB	
CC	2	CERCIS CANADENSIS	EASTERN REDBUD	8' BB	MULTI-STEM 4-CANES
		SHRUBS			
CS	20	CORNUS STOLONIFERA	REDTWIG DOGWOOD	3' BB	60" O.C. SPACING
CF	20	CORNUS FLAVIRAMEA	YELLOWTWIG DOGWOOD	3' BB	60" O.C. SPACING
VMK	30	VIBURNUM X.B. 'MOHAWK'	MOHAWK VIBURNUM	3' B.B	60" O.C. SPACING
FI	18	FORSYTHIA X. INTERMEDIA	BORDER FORSYTHIA	3' B.B	60" O.C. SPACING
		LARGE AND SMALL EVERGREEN TREES			
AW	2	ABIES CONCOLOR	CONCOLOR WHITE FIR	8' BB	
AWL	2	ABIES CONCOLOR	CONCOLOR WHITE FIR	10' BB O	
PS	7	PINUS STROBUS	WHITE PINE	8' BB	
PSL	6	PINUS STROBUS	WHITE PINE	10' BB O	



4A detention pond planting detail

SCALE: 1" = 20'-0"

upland zone seed mix

Natural Basin: Dry Upland Zone:Permanent Grasses (Minimum 5 species)

Scientific Name	Common Name	Scientific Name	Common Name
Andropogon gerardii	Big bluestem grass	*Koeleria cristata*	June grass
Andropogon scoparius	Little bluestem grass	*Panicum virgatum*	Switch grass
Bouteloua curtipendula	Side-oats gramma	*Sorghastrum nutans*	Indian grass
Elymus canadensis	Canada wild rye	*Sporobolius heterolepis*	Prairie dropseed

Natural Basin: Dry Upland Zone: Native Forbs (Minimum 9 species)

Scientific Name	Common Name	Scientific Name	Common Name
Amorpha canescens	Lead plant	Lupinus perennis	Wild lupine
Anemone cylindrica	Thimbleweed	Monarda fistulosa	Wild bergamot
Aquilegia canadensis	Wild columbine	Parthenium integrifolium	Wild quinine
Asclepias tuberosa	Butterfly weed	Petalostemum purpureum	Purple prairie clover
Aster ericoides	Heath aster	Physostegia virginiana arenaria	Prairie obedient plant
Aster laevis	Smooth blue aster	Pycnanthemum virginianum	Common mountain mint
Aster novae-angliae	New England aster	Ratibida pinnata	Yellow coneflower
Baptista leucantha	White wild indigo	Rudbeckia hirta	Black-eyed susan
Cassia fasciculata	Partridge pea	Rudbeckia subtomentosa	Sweet black-eyed susan
Coreopsis lanceolata	Sand coreopsis	Silphium laciniatum	Compass plant
Coreopsis tripteris	Tall coreopsis	Solidago juncea	Early goldenrod
Echinacea purpurea	Broad-leaved purple coneflower	Solidago nemoralis	Old-field goldenrod
Eryngium yuccifolium	Rattlesnake master	Solidago rigida	Stiff goldenrod
Helianthus mollis	Downy sunflower	Tradescantia ohiensis	Common spiderwort
Heliopsis helianthoides	False sunflower	Vernonia altissima taeniotricha	Hairy tall ironweed
Lespedeza capitata	Round-headed bush clover	Veronicastrum virginicum	Culver's root
Liatris aspera	Rough blazing star		

Note: These native plants are appropriate for areas surrounding basins categorized as natural basins and recommended within areas that have elevations higher than the 100-year flood elevation. This seed selection consists of dry-to-mesic prairie, basic prairie, and low-profile prairie plant species.

edge zone seed mixtures

OPEN DETENTION BASINS: EDGE ZONE VEGETATION

A variety of trees, shrubs, wildflowers, and grasses may be planted in the edge zone along the banks of detention basins. A native wetland edge or native sedge meadow seed mix is recommended. Edge Zone: Native Seed Mixes

Grasses/Sedges/Rushes (Minimum 5 species)

Scientific Name	Common Name	Scientific Name	Common Name
Carex `lurida	Bottlebrush sedge	Leersia oryzoides	Rice cut grass
Carex vulpinoidea	Brown fox sedge	Scirpus acutus	Hard-stemmedbulrush
Echinochloa crusgalli	Barnyard grass	Scirpus atrovirens	Dark green rush
Elymus Canadensis	Canada wild rye	Scirpus pungens	Chairmaker's rush
Glyceria striata	Fowl manna grass	Scirpus validus creber	Great bulrush (softstem)
Juncus effusus	Common rush		

Native Forbs (Minimum 9 species)

Scientific Name	Common Name	Scientific Name	Common Name
Acorus calamus	Sweet flag	Mimulus ringens	Monkey flower
Actinomeris alternifolia	Wingstem	Peltandra virginica	Arrow arrum
Alisma subcordatum	Common water plantain	Polygonum pensylvanicum	Pinkweed
Asclepias incarnate	Swamp milkweed	Pontederia cordata	Pickerel weed
Aster simplex	Panicled aster	Rosa palustris	Swamp rose
Bidens spp.	Bidens, various	Rudbeckia laciniata	Wild golden glow
Cassia hebecarpa	Wild senna	*Sagittaria latifolia*	*Common arrowhead*
Eupatorium perfoliatum	Common boneset	Spiraea alba	Meadowsweet
Helenium autumnale	Sneezeweed	Verbena hastata	Blue vervain
Iris virginica shrevei	Blue flag iris	Vernonia fasciculata	Common ironweed
Ludwigia alternifolia	Seedbox		

Note: A quick growing species such as annual rye grass (lillium multiflorum)and species which will provide the permanent cover (e.g., seed oats) should also be included in all Edge Zone seed mixes.

pond zone plant list (plugs and bare root)

Native Plants for Pond Zone (min. 4-species)

Scientific Name	Common Name	Spacing (inches O.C.)	Scientific Name	Common Name	Spacing (inches O.C.)
Acorus calamus	Sweet flag	24	Polygonum amphibium	Water knotweed	36
Carex lacustris	Common lake sedge	24	Pontederia cordata	Pickerel weed	24
Cephalanthus occidentalis	Buttonbush	5 feet	Potamogeton natans	Common pondweed	36
Decodon verticillatus	Swamp Loosestrife	24	Potamogeton pectinatus	Sago pondweed	36
Elodea canadensis	Common waterweed	36	Sagittaria latifolia	Common arrowhead	24
Hibiscus laevis	Halberd-leaved rose mallow	24	Scirpus acutus	Hard-stemmed bulrush	18
Hibiscus palustris	Swamp rose mallow	24	Scirpus atrovirens	Dark green rush	18
Iris virginica shrevei	Blue flag iris	18	Scirpus cyperinus	Wool grass	24
Justicia americana	Water willow	5 feet	Scirpus fluviatilis	River bulrush	18
Nelumbo lutea	Lotus	48	Scirpus validus creber	Great bulrush	18
Nuphar advena	Yellow pond lily	36	Sparganium americanum	American bur reed	18
Nymphaea tuberosa	White water lily	36	Sparganium eurycarpum	Common bur reed	18
Peltandra virginica	Arrow arum	18	Vallisneria americana	Tape grass	36

Note: Plant species selected should cover 25% of the pond zone and should also cover the range of water depths within the pond zone(2ft to 3ft). (For example, 4 plant species may not all be placed at an 18ft water depth covering 25% of the pond zone.)

FPA
FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416

seal:

STATE OF MICHIGAN FELINO A. PASCUAL LANDSCAPE ARCHITECT No. 4433 REGISTERED LANDSCAPE ARCHITECT

client:

S & S HOLDING, LLC
1451 Gratiot Avenue
Clinton Township,
Michigan 48036

project:

HAMPTON MANOR of VAN BUREN TOWNSHIP

project location:
Van Buren Township , Michigan
Morton Taylor Road & Tyler Road

sheet title:

DETENTION PLANTING DETAIL

job no./issue/revision date:

LS 19.123.11 SPA 11-5-2019
LS 19.123.11 SPA 11-26-2019
LS 20.015.01 SPA 2-2-2020

drawn by:
JP, DK

checked by:
FP

date:
10-26-2019

notice:
Copyright © 2019
This document and the subject matter contained therein is proprietary and is not to be used or reproduced without the written permission of Felino Pascual and Associates
Do Not scale drawings. Use figured dimensions only

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 For free location of public utility lines

The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no:
LS19.123.10

sheet no:
LS-4 of 4