

CONSTRUCTION PLANS FOR MEMORIAL PARK REDEVELOPMENT 1301 HIGHLAND STREET HAMMOND, LAKE COUNTY, INDIANA

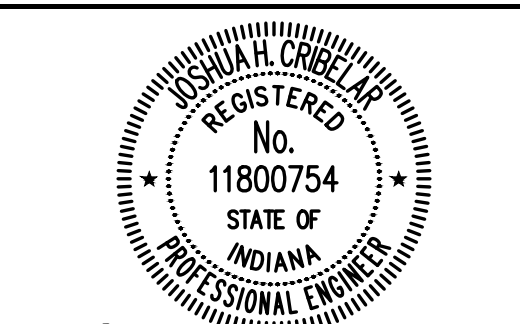


City of Hammond
Mayor Thomas M.
McDermott Jr.
5925 Calumet Avenue
Hammond, IN 46320



MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



Joshua H. Cribelar
CERTIFIED BY

ISSUANCE INDEX	
DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

TITLE SHEET

C001

INDEX	
DESCRIPTION	SHEET No.
TITLE SHEET	C001
GENERAL NOTES	C002
SPECIFICATIONS	C003
EXISTING TOPOGRAPHY & DEMOLITION PLAN	C100
DEVELOPMENT PLAN	C200
TRAFFIC CONTROL & LIGHTING PLAN	C210
ROAD PLAN & PROFILE	C300-C302
DETAILED GRADING PLAN	C310
EMERGENCY FLOOD ROUTING PLAN	C320
STORM SEWER PLAN & PROFILE	C400-C405
SANITARY SEWER PLAN & PROFILE	C410-C411
STORM & SANITARY SEWER DATA TABLES	C415
UTILITY LATERAL PLAN	C420
WATER DISTRIBUTION PLAN	C430
EROSION CONTROL PLAN	C500
STORMWATER POLLUTION PREVENTION PLAN	C510
EROSION CONTROL DETAILS	C520-C522
STREET DETAILS	C600-C601
STORM SEWER DETAILS	C610
WATER DETAILS	C620
SANITARY SEWER DETAILS & SPECIFICATIONS	C630
MAINTENANCE OF TRAFFIC PLAN	C700
LANDSCAPE PLAN	L100

SITE DATA TABLE

ZONING (EXISTING / PROPOSED):	S1 / R-1U, R-2, R-4
GROSS AREA:	14.37 AC.
PUBLIC RIGHT-OF-WAY (R/W):	±2.41 AC. (16.8%)
TOTAL R-1U LOTS:	28
R-1U AREA:	±4.16 AC. (28.9%)
R-2 AREA:	±1.71 AC. (11.9%)
R-4 AREA:	±3.05 AC. (21.2%)
OUTLOT AREA:	±3.04 AC. (21.2%)
LOCAL ROAD LENGTH:	2,297 LF
TYP. R/W WIDTH:	50' (LOCAL ROAD)
R-1U ZONING SUMMARY (LOT 10-37)	
MIN. LOT AREA:	4,800 SF
MIN. LOT WIDTH:	50'
TYP. LOT DEPTH:	110'
MIN. FRONT YARD SETBACK:	15'
MIN. SIDE YARD SETBACK:	20% TOTAL WIDTH
MIN. REAR YARD SETBACK:	20'
R-2 ZONING SUMMARY (LOT 2-9)	
MIN. LOT AREA (SINGLE-FAMILY):	6,250 SF
MIN. LOT AREA (TWO-FAMILY):	7,500 SF
MIN. LOT WIDTH:	60' (VARIANCE TO 45')
MIN. FRONT YARD SETBACK:	25'
MIN. SIDE YARD SETBACK:	20% TOTAL WIDTH (0' EACH) (VARIANCE TO 0')
MIN. REAR YARD SETBACK:	25'
R-4 ZONING SUMMARY (LOT 1)	
MIN. LOT AREA:	130,680 SF
MIN. FRONT YARD SETBACK:	30'
MIN. SIDE YARD SETBACK:	25% TOTAL WIDTH
MIN. REAR YARD SETBACK:	30'

DEVELOPMENT SCHEDULE:
START DATE: SPRING 2025
COMPLETION DATE: FALL 2025

BENCHMARK DATA

BENCHMARK INFORMATION (NAVD 88 DATUM)
BENCHMARK ELEVATIONS WERE ESTABLISHED FROM GPS OBSERVATIONS ON THE IDENTIFIED BASE STATION DESCRIBED WITHIN. AN NGS OPUS SOLUTION (FILE #1609958942369) WAS OBTAINED AND USED TO CONTROL THE PROJECT'S VERTICAL DATUM. THE ELEVATIONS WERE THEN TRANSFERRED TO THE SITE USING DIFFERENTIAL LEVELING.

TBM #51
MAG SPIKE SET IN S. FACE OF COMBO POLE, 25'± NORTH OF SUMMER STREET & 5' WEST OF DRIVE TO RESIDENCE #1507
ELEV: 592.81

TBM #70
RAILROAD SPIKE SET SOUTH SIDE COMBO POLE, LOCATED 125'± NW OF THE STUB OF LYONS STREET AND NORTHWEST QUAD OF PROJECT SITE
ELEV: 592.81

TBM #71
CHISELED 'X' NORTHWEST BOLT OF FIRE HYDRANT LOCATED 25'± SOUTH OF RAY AVE. & 90'± NW OF PARKING LOT
ELEV: 593.65

TBM #72
CHISELED 'X' NORTHEAST BOLT OF FIRE HYDRANT LOCATED AT SW QUAD OF HIGHLAND STREET & RAY AVE
ELEV: 593.55

TBM #73
MAG SPIKE SET WEST SIDE OF COMBO POLE, LOCATED AT NE QUAD OF HIGHLAND STREET AND WILLARD ROAD.
ELEV: 592.21

TBM #74
MAG SPIKE SET WEST SIDE OF COMBO POLE, LOCATED ON EAST SIDE PROJECT SITE AND ON THIRD COMBO POLE SOUTH OF QUAD OF PROPERTY
ELEV: 592.37

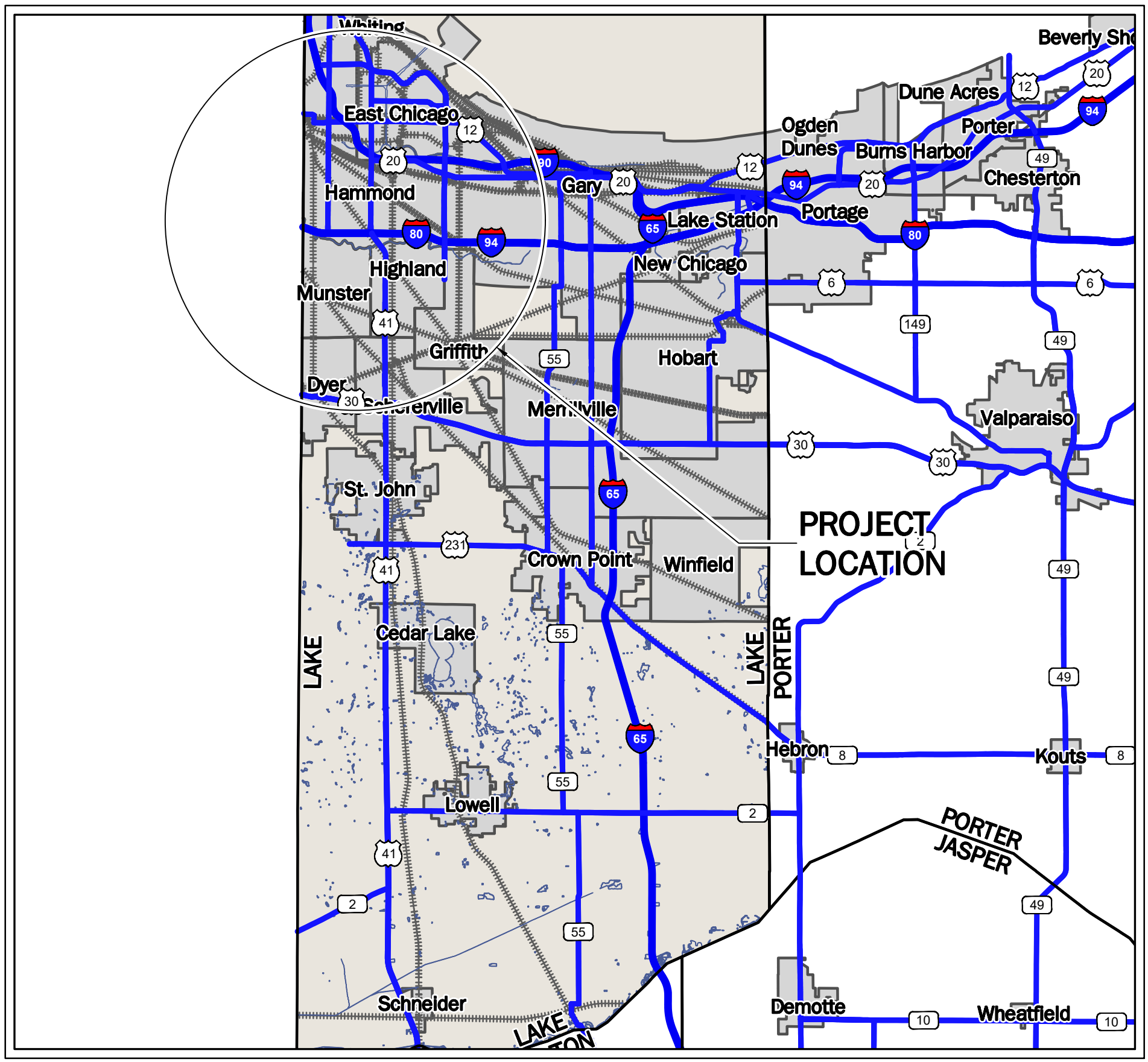
LEGAL DESCRIPTION

PARCEL 1:
A part of vacant Outlot "B" in Lyons Addition to the City of Hammond, as per plat thereof, recorded in Plat Book 14 page 18, in the Office of the Recorder of Lake County, Indiana, lying in the Northeast 1/4 of Section 6, Township 36 North, Range 9 West of the Second Principal Meridian, in the City of Hammond, North Township, Lake County, Indiana, more particularly described as beginning at the Northernly and the Westernly most point of said Outlot "B" which is the intersection point of the curved East line of dedicated Ray Avenue with the North line of said Outlot "B" which is a line parallel to and 102.5 feet from the Northernly line of 40-foot wide dedicated Highland St., thence South 61 degrees East on said North line of dedicated Outlot "B", 294.11 feet; thence South 29 degrees West 102.50 feet to the North line of Highland St., thence North 61 degrees West on the Northernly line of Highland Street, 386.73 feet to the curved East line of dedicated Ray Ave.; thence Northernly on said curved 40-foot East right of way line which is a curve of 654.56 feet radius, curves to the Southeast 102.83 feet to the point of beginning.

PARCEL 2:
A part of the Northeast 1/4 of Section 6, Township 36 North, Range 9 West of the Second Principal Meridian, in the City of Hammond, North Township, Lake County, Indiana, lying Northernly and Easternly to the Lyons Addition, to the City of Hammond as per plat thereof, recorded in Plat Book 14 page 18, in the Office of the Recorder of Lake County, Indiana, and Southernly of the South line of the 200-foot wide strip of land owned by the New York, Chicago and St. Louis Railroad and described in deed record 1029 page 315, in the Office of the Recorder of Lake County, Indiana, being more particularly described as beginning at the Northernly and Westernly most point of vacant Outlot "B" in said Lyons Addition, thence North 61 degrees West on the North line of said vacant Outlot "B", projected Northwesterly which is also the Northernly line, to the area of said Lyons Addition, 97.93 feet; thence North 8 degrees 05 minutes East on the East line of Lyons Addition, 189.94 feet; thence North 0 degrees 05 minutes East 265.00 feet; thence North 6 degrees 44 minutes West 63.14 feet; thence North 29 degrees 03 minutes 39 seconds West 340.71 feet; thence North 62 degrees 09 minutes 30 seconds East 46.16 feet; thence North 154 degrees 58 feet to the South line of said 200-foot wide strip of land owned by the New York, Chicago and St. Louis Railroad; thence South 64 degrees 34 minutes 30 seconds East along the said South line of the 200-foot strip 652.46 feet; thence South 87.83 feet to the North line of said Outlot "B"; thence North 61 degrees West 394.31 feet to the point of beginning.

PARCEL 3:
A part of the Northeast 1/4 of Section 6, Township 36 North, Range 9 West of the Second Principal Meridian, in the City of Hammond, North Township, Lake County, Indiana, lying Northernly and Easternly to the Lyons Addition to the City of Hammond, as per plat thereof, recorded in Plat Book 14 page 18, in the Office of the Recorder of Lake County, Indiana, and Southernly of the South line of the 200-foot wide strip of land owned by the New York, Chicago and St. Louis Railroad and described in deed record 1029 page 315, in the Office of the Recorder of Lake County, Indiana, being more particularly described as beginning at the Northernly and Easternly most point of vacant Outlot "B" in said Lyons Addition, thence North 61 degrees West on the North line of said vacant Outlot "B" which is also the Northernly line of said Lyons Addition, 189.94 feet; thence North 0 degrees 05 minutes East 265.00 feet; thence North 6 degrees 44 minutes West 63.14 feet; thence North 29 degrees 03 minutes 39 seconds West 340.71 feet; thence North 62 degrees 09 minutes 30 seconds East 46.16 feet; thence North 154 degrees 58 feet to the South line of said 200-foot wide strip of land owned by the New York, Chicago and St. Louis Railroad; thence South 64 degrees 34 minutes 30 seconds East along the said South line of the 200-foot strip 652.46 feet; thence South 87.83 feet to the North line of said Outlot "B"; thence North 61 degrees West 394.31 feet to the point of beginning.

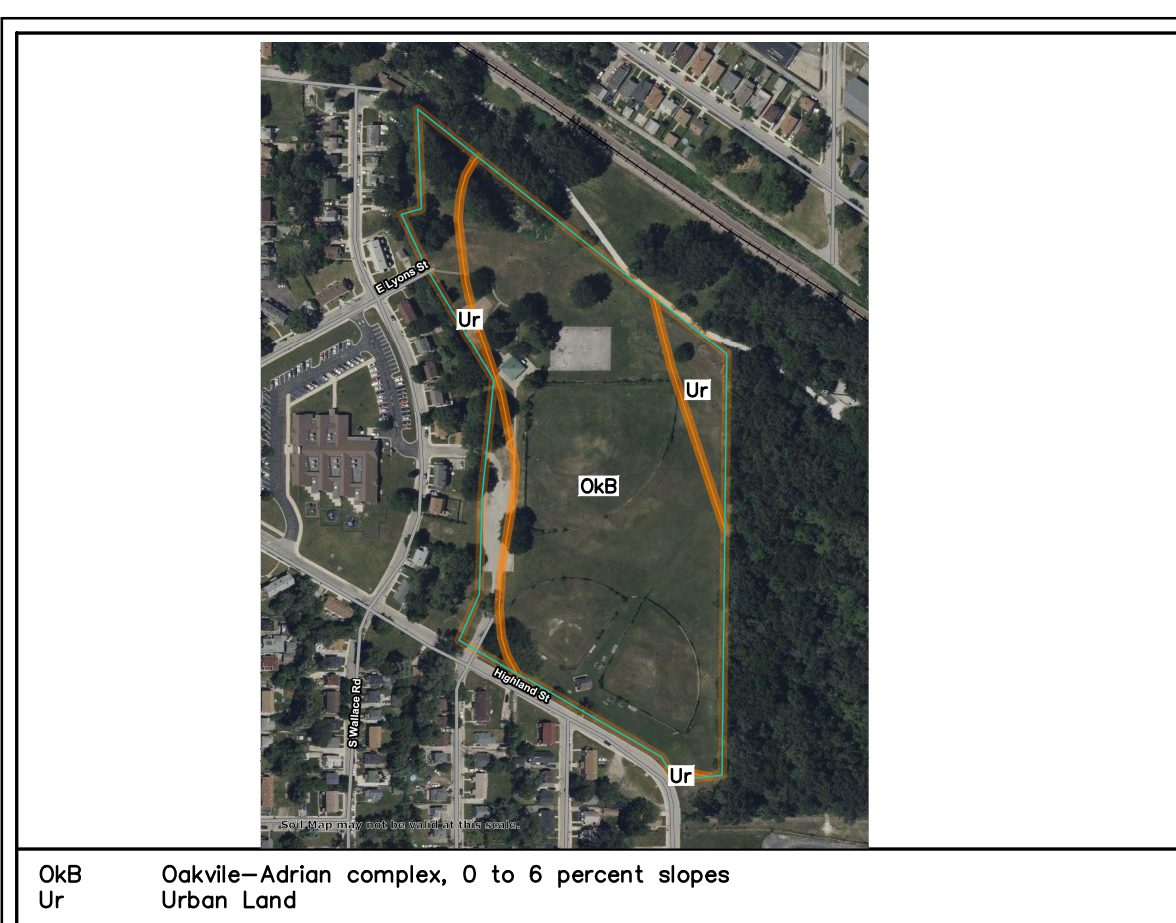
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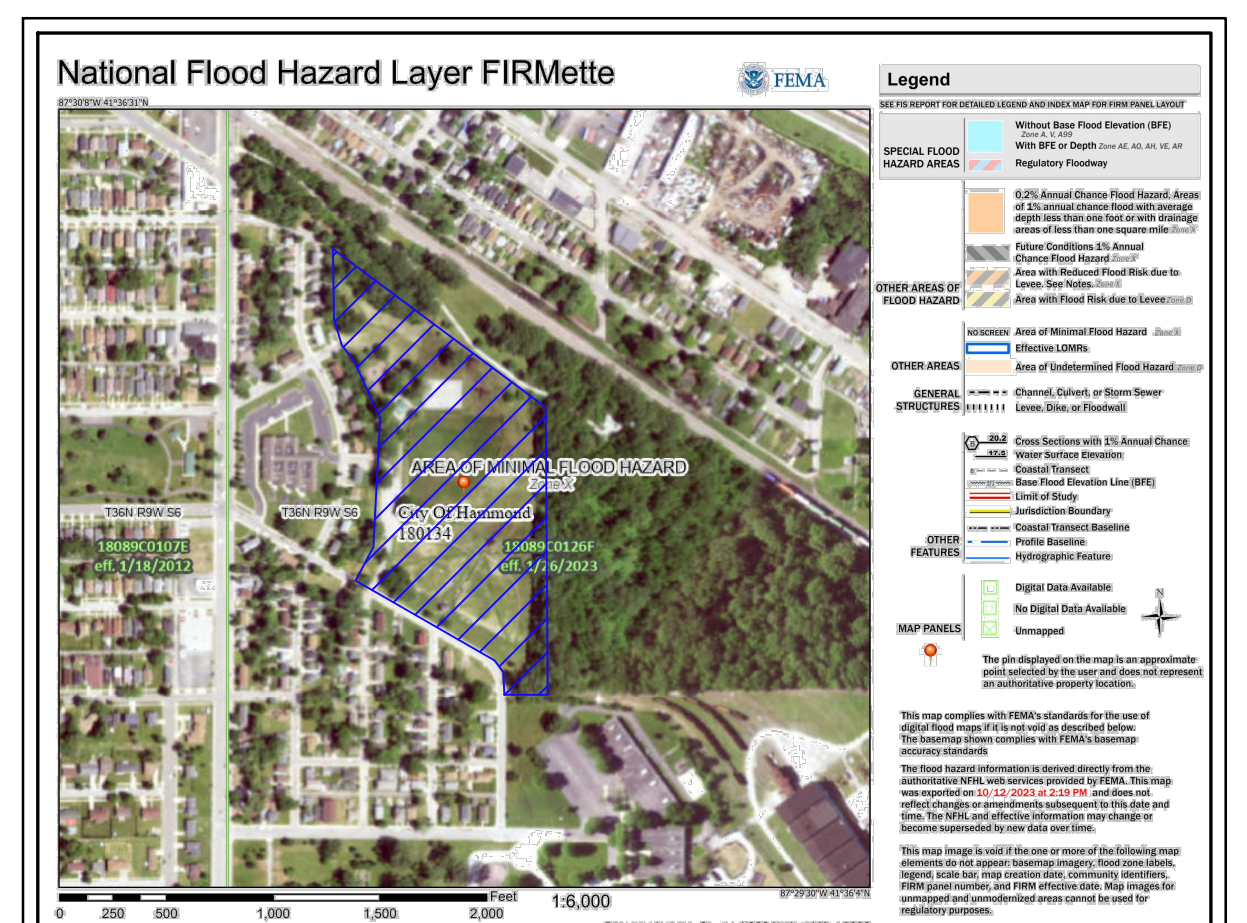
LOCATION MAP
NOT TO SCALE



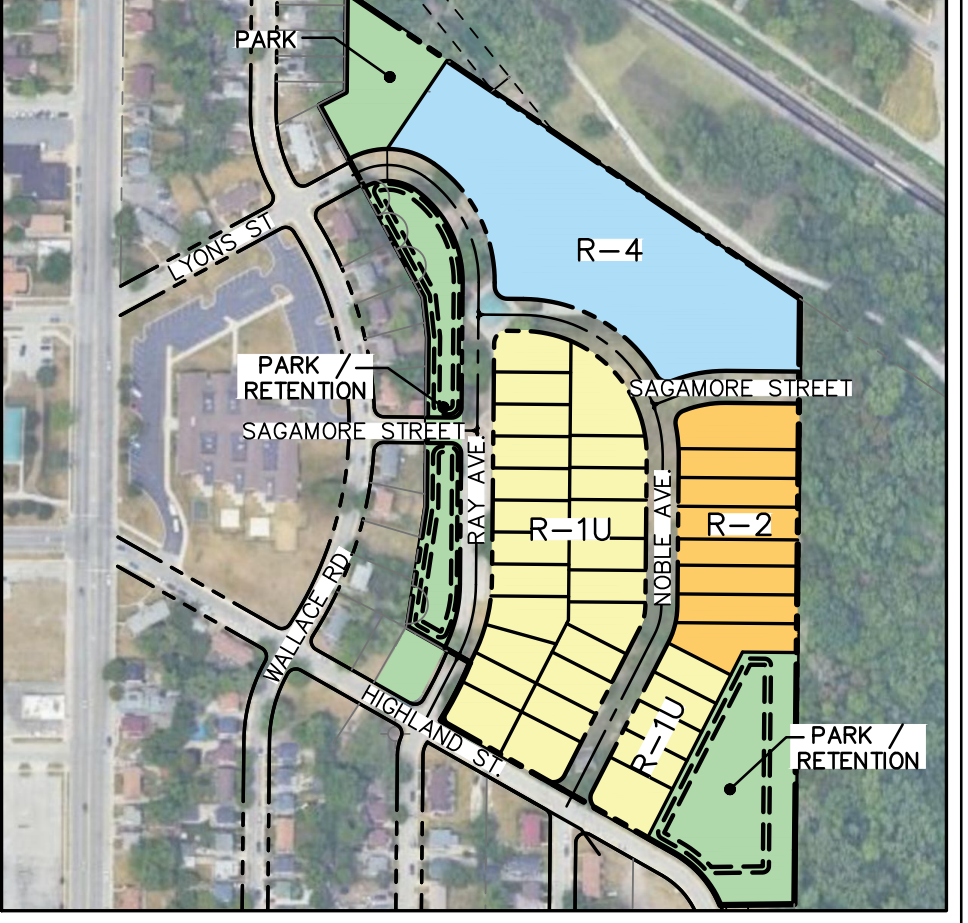
VICINITY MAP
NOT TO SCALE



SOILS MAP
NOT TO SCALE



FEMA MAP
NOT TO SCALE



ZONING MAP
SCALE: 1"=300'

DEVELOPER:
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PLOT DATE: 12/05/2024 4:28 PM
PLOT SCALE: 1:1
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GENERAL NOTES

1. ALL WORK TO CONFORM TO STATE AND LOCAL REGULATIONS.
2. CONTRACTOR SHALL KEEP ADJOINING PROPERTIES CLEAN OF CONSTRUCTION DEBRIS AND CONSTRUCTION TRAFFIC AT ALL TIMES.
3. THE CONTRACTOR SHALL PROTECT AND NOT DESTROY THE BASE SURVEY CONTROL POINTS DURING DEMOLITION AND CONSTRUCTION.
4. ALL UTILITY INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR. CONTACT ENGINEER IMMEDIATELY IF ANY VARIATION EXISTS.
5. MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT AGAINST DAMAGE DURING DEMOLITION AND CONSTRUCTION OPERATIONS.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.

EXISTING TOPOGRAPHY NOTES

1. EXISTING TOPOGRAPHY IS PROVIDED BY: AMERICAN STRUCTUREPOINT, PROJECT: 2021.03290 DATED: 2023-06-12

DEMOLITION NOTES

1. CLEAR AND GRUB ALL TREES AND VEGETATION NECESSARY FOR CONSTRUCTION.
2. PROTECT TREES TO REMAIN DURING CONSTRUCTION.
3. PLANT MATERIALS TO REMAIN, TO BE PROTECTED BY TREE FENCE WHICH ENCOMPASSES IT'S DRIP LINE. NO CONSTRUCTION EQUIPMENT, MATERIALS OR DEBRIS SHALL BE LOCATED WITHIN TREE PROTECTION BOUNDARIES. NO DEMOLITION CAN OCCUR UNTIL TREE PROTECTION IS APPROVED BY THE OWNER.
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, FENCES, CONCRETE, ASPHALT PAVEMENT AND OTHER MISCELLANEOUS APPURTENANCES OFF SITE, UNLESS NOTED TO REMAIN ON THE CONTRACT DRAWINGS.
5. DEMOLISH FOUNDATIONS AND OTHER BELOW-GRADE CONSTRUCTION, INCLUDING CONCRETE SLABS, TO A DEPTH OF NOT LESS THAN 48 INCHES BELOW LOWEST FOUNDATION LEVEL.
6. COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES, WITH COMPACTED GRANULAR BACKFILL.
7. THE USE OF ANY TYPE OF EXPLOSIVES WILL NOT BE PERMITTED.
8. CONDUCT DEMOLITION AND CONSTRUCTION OPERATIONS TO ENSURE MINIMAL INTERFERENCE WITH STREETS, WALKS AND OTHER ADJACENT OCCUPIED FACILITIES.
9. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY GOVERNING AUTHORITIES.
10. ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION AND CONSTRUCTION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT STRUCTURES AND OTHER FACILITIES AND INJURY TO PERSONS.
11. PROMPTLY REPAIR DAMAGE TO ADJACENT FACILITIES CAUSED BY DEMOLITION AND CONSTRUCTION OPERATIONS.
12. ALL UTILITIES TO BE REMOVED SHALL BE DISCONNECTED AND CAPPED AT THE NEAREST CONNECTION POINT.
13. NO ON-SITE BURNING IS PERMITTED.
14. CONTRACTOR SHALL USE MEASURES TO CONTROL DUST AT ALL TIMES.
15. DEMOLITION ITEMS INCLUDE BUT ARE NOT LIMITED TO DEMOLITION ITEMS INDICATED ON THIS PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR RELOCATE ITEMS WHICH INTERFERE WITH NEW CONSTRUCTION.
16. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING DEMOLITION.

SITE NOTES

1. ALL PARKING STRIPES ARE TO BE 4" PAINTED (WHITE). ADA ACCESSIBLE PARKING STRIPES SHALL BE 4" PAINTED (BLUE).
2. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT OR FACE OF CURB, UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE TO FACE OF BRICK OR FACING MATERIAL, WHERE APPLICABLE.
4. ALL DIMENSIONS ARE PARALLEL WITH, OR PERPENDICULAR TO BASE LINES, PROPERTY LINES OR BUILDING LINES, UNLESS OTHERWISE NOTED.
5. PROVIDE SMOOTH TRANSITIONS FROM NEW AREAS TO EXISTING FEATURES AS NECESSARY.
6. RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS ALL AREAS WHERE THE EXISTING PAVEMENT OR LAWNS ARE DAMAGED DURING CONSTRUCTION FROM TRAFFIC BY CONTRACTORS, SUBCONTRACTORS OR SUPPLIERS AFTER CONSTRUCTION WORK IS COMPLETE.
7. EXISTING PAVEMENT TO BE SAW CUT IN ALL AREAS WHERE INDICATED NEW PAVEMENT TO JOIN EXISTING.
8. THE EDGE OF THE EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING ASPHALT.
9. CONCRETE SAW CUTTING SHALL BE DONE AS SOON AS POURED CONCRETE HAS CURED AND CAN SUPPORT WEIGHT. PROVIDE A NEAT CUT WHICH IS TRUE IN ALIGNMENT.
10. ALL JOINTS ARE TO CONTINUE THROUGH THE CURB.
11. RADIAL JOINTS SHALL BE NO SHORTER THAN 1.5'.
12. CONTRACTOR SHALL USE A THICKENED EXPANSION JOINT AROUND THE PERIMETER OF ANY BLOCK OUT IN THE CONCRETE PAVING.
13. ALL CONSTRUCTION JOINTS SHALL BE SAWN, CLEANED OF DEBRIS, BLOWN DRY AND IMMEDIATELY SEALED WITH THE APPROPRIATE SEALANT ACCORDING TO MANUFACTURER'S DIRECTIONS.
14. ALL MATERIALS TO BE IN ACCORDANCE WITH LOCAL DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS RELATIVE TO MATERIAL, MIX, PLACEMENT AND WORKMANSHIP.
15. ALL SIDEWALKS SHALL COMPLY WITH ADA STANDARDS. MAXIMUM CROSS SLOPE OF 1:50 AND MAXIMUM LONGITUDINAL SLOPE OF 1:20.
16. CHAMFER ALL ENDS OF CURBS.

GRADING NOTES

1. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
2. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH), SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION. SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATIONS OF UTILITIES FOR THEIR OWN WORK.
4. CONTRACTOR TO ADJUST ALL EXISTING SURFACE INFRASTRUCTURE (HYDRANTS, VALVES, HANDHOLES, CASTINGS, IRRIGATION SYSTEM, UTILITY PEDESTALS, ETC.) AS REQUIRED TO MEET PROPOSED GRADE AT HIS/HER OWN COST.
5. AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL SHALL BE PERFORMED BY A LOADED TANDEM PNEUMATIC TIRE DUMP TRUCK MINIMUM GROSS VEHICLE WEIGHT OF 15 TONS. THE TIRES SHALL BE OPERATED AT INFLATION PRESSURES BETWEEN 70-80 PSI UNLESS OTHERWISE NOTED BY THE GEOTECHNICAL ENGINEER. THE TIRES SHALL BE INFLATED WITH AIR ONLY, NO LIQUID SHALL BE USED. THE PROOFROLL SHALL BE COMPLETED UNDER INSPECTION OF SOILS FIRM TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
6. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING IN ALL AREAS. AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, STANDING WATER CONDITIONS.
7. ALL PROPOSED SPOT ELEVATIONS OR CONTOURS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS. THIS INCLUDES UNPAVED, GRASS, OR LANDSCAPED AREAS, WHERE THE FINAL GRADE SHALL REPRESENT THE TOP OF MULCH, TOPSOIL, OR OTHER MATERIAL AS SPECIFIED.
8. SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED. THIS INCLUDES ADJUSTING THE SUBGRADE ELEVATIONS IN UNPAVED AREAS TO ACCOUNT FOR THE ANTICIPATED TOPSOIL, MULCH, OR OTHER MATERIALS SPECIFIED.
9. TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
10. CONTRACTOR TO PERPETUATE ANY SUBSURFACE DRAIN TILES OR PIPES ENCOUNTERED DURING CONSTRUCTION AND PROVIDE POSITIVE OUTLET TO DOWNSTREAM RECEIVING SYSTEM. CONTRACTOR TO NOTIFY THE ENGINEER WITH ANY CIRCUMSTANCES WHERE THIS CANNOT BE ACCOMPLISHED.
11. DUE TO SITE CONSTRAINTS, THE EARTHWORK FOR THE SITE AS DESIGNED MAY OR MAY NOT BALANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE EXISTING CONDITIONS AND INCLUDE IN THEIR BID ALL EARTHWORK COSTS INCLUDING IMPORTS AND/OR EXPORTS NECESSARY TO MAKE THE SITE BALANCE.
12. CONTRACTOR TO STABILIZE EXPOSED EARTH AS INDICATED BY THE STORMWATER POLLUTION PREVENTION PLAN OR GOVERNING AUTHORITY.

UTILITY NOTES

1. SITE UTILITIES SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
2. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH), SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION. SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATIONS OF UTILITIES FOR THEIR OWN WORK.
4. CONTRACTOR TO ADJUST ALL EXISTING SURFACE INFRASTRUCTURE (HYDRANTS, VALVES, HANDHOLES, CASTINGS, IRRIGATION SYSTEM, UTILITY PEDESTALS, ETC.) AS REQUIRED TO MEET PROPOSED GRADE.
5. ALL UTILITY MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL STANDARDS FOR EACH UTILITY AGENCY HAVING JURISDICTION.
6. TRENCHES FOR ALL UTILITY LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT GRANULAR MATERIAL IF THE TOP OF THE TRENCH IS WITHIN 5 FEET OF PAVEMENT.
7. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES AND CONDUITS TO AVOID CONFLICTS AND PROVIDE REQUIRED MINIMUM DEPTHS OF COVER. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL BENDS WITH THRUST BLOCKS REQUIRED TO ASSURE PROPER INSTALLATION OF WATER MAINS AND LATERALS.
8. IN THE EVENT OF A CONFLICT BETWEEN WATER LINES AND STORM DRAINS, THE CONTRACTOR SHALL EITHER ADJUST THE WATER LINE DOWNWARD IN SUCH A MANNER SO THAT THE PIPE MANUFACTURER'S RECOMMENDATIONS ON PIPE DEFLECTION AND JOINT STRESS ARE NOT EXCEEDED OR THE CONTRACTOR SHALL PROVIDE APPROPRIATE BENDS AND CROSSINGS.
9. ALL COORDINATES AND DIMENSIONS ARE TO THE CENTERLINE OF UTILITIES AND STRUCTURES.
10. ALL PROPOSED STORM SEWER AND DRAINAGE APPURTENANCES SHALL BE IN CONFORMANCE WITH THE CITY OF HAMMOND STORMWATER SPECIFICATIONS, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE STORMWATER SPECIFICATIONS SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE STORMWATER SPECIFICATIONS.

EROSION CONTROL NOTES

1. CONTRACTOR SHALL INSTALL ALL PERIMETER SILT FENCE AND SEDIMENT CONTROL BARRIERS PRIOR TO CLEARING AND GRADING.
2. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
3. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
4. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING RE-GRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
5. SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN RECEIVING WATER. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
6. WASTE AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTE AND UNUSED BUILDING MATERIALS IS REQUIRED.
7. SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
8. SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND RE-DISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
9. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC AT A MINIMUM TO ENSURE SEDIMENT DOES NOT FLOW IN PIPE.
10. THE SITE IS/IS NOT LOCATED WITHIN ANY FLOODPLAIN, FLOODWAY OR FLOODWAY FRINGE AS INDICATED ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR LAKE COUNTY, IN, MAP NUMBER 18099C0126F, DATED JANUARY 26, 2023.
11. SCHEDULE OF EARTHWORK ACTIVITIES:
 - a. THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED AS SOON AS POSSIBLE. UN-VEGETATED AREAS THAT ARE SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FIFTEEN (15) DAYS OR MORE MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITH MEASURES APPROPRIATE FOR THE SEASON TO MINIMIZE EROSION POTENTIAL. ALTERNATIVE MEASURES TO SITE STABILIZATION ARE ACCEPTABLE IF THE PROJECT SITE OWNER OR THEIR REPRESENTATIVE CAN DEMONSTRATE THEY HAVE IMPLEMENTED EROSION AND SEDIMENT CONTROL MEASURES ADEQUATE TO PREVENT SEDIMENT DISCHARGE.
 - b. TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIMES OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
 - c. INSTALL INLET PROTECTION AROUND INLETS IMMEDIATELY UPON COMPLETION OF THE STRUCTURE. REMOVE INLET PROTECTION FOR PAVING OPERATION. REPLACE INLET PROTECTION AFTER PAVING IS COMPLETE. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON SEEDED AREAS BEHIND THE CURB.
12. PRIOR TO COMPLETION OF THE PROJECT, CONTRACTOR SHALL CLEAN OUT ALL STORM DRAINAGE STRUCTURES AND RESTORE ALL DITCHES AND PONDS TO DESIGNED GRADES.
13. CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROL BARRIERS ONCE CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED.
14. ALL PROPOSED EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH THE CITY OF HAMMOND STORMWATER SPECIFICATIONS, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE STORMWATER SPECIFICATIONS SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE STORMWATER SPECIFICATIONS.
15. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.

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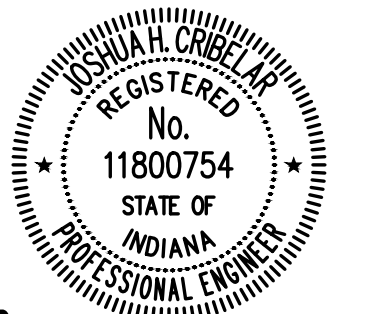


City of Hammond
 Mayor Thomas M.
 McDermott Jr.
 5925 Calumet Avenue
 Hammond, IN 46320



MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
 Hammond, Indiana 46320



Joshua H. Cribelar
 CERTIFIED BY

ISSUANCE INDEX	
DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

GENERAL NOTES

C002

EARTHWORK:

A. GENERAL

- EARTHWORK INCLUDES CLEARING, GRUBBING, SUBGRADE PREPARATION, REMOVAL OF TREES AND VEGETATION (INCLUDING STUMPS), PROTECTION OF TREES TO REMAIN, STRIPPING AND STORAGE OF TOPSOIL, FILL COMPACTION AND ROUGH GRADING OF ENTIRE SITE AS INDICATED ON DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.
- CONTRACTOR SHALL PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFF THE SITE AS MAY BE NECESSARY TO PRODUCE THE GRADES REQUIRED AS SHOWN ON THE DRAWINGS. FILL OBTAINED FROM OFF SITE MUST BE SUITABLE SOIL AS DEFINED IN THE SPECIFICATIONS OR AS OTHERWISE APPROVED BY OWNER.
- THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS CURRENT STATE AND SHALL REMOVE ALL TRASH, RUBBISH, AND DEBRIS FROM THE SITE PRIOR TO STARTING EXCAVATION.
- EXCEPT FOR STRIPPED TOPSOIL AND OTHER MATERIALS INDICATED TO BE STOCKPILED OR OTHERWISE REMAIN OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.
- DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, DRIVES, FACILITIES, ETC. WITHOUT OWNER PERMISSION OR AUTHORITY HAVING JURISDICTION.
- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING EARTHWORK AND CLEARING OPERATIONS. EROSION CONTROL MEASURES SHOULD BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION.
- CONTRACTOR SHALL CAREFULLY MAINTAIN ALL BENCHMARKS, MONUMENTS, AND OTHER REFERENCE POINTS. IF DISTURBED, CONTRACTOR SHALL ENGAGE LICENSED LAND SURVEY FOR REPLACEMENT OF REFERENCE POINTS.
- WHERE THESE SPECIFICATIONS CONFLICT WITH THE CITY OF HAMMOND STANDARDS, THE STANDARDS OF THE JURISDICTION HAVING AUTHORITY SHALL PREVAIL.

B. MATERIALS

- CONTRACTOR TO PROVIDE BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS.
- SATISFACTORY (OR SUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM ACCORDING TO ASTM D2487, OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION AND OTHER DELETERIOUS MATERIAL.
- UNSATISFACTORY (OR UNSUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO THESE GROUPS; EXCESS YIELDING; DO NOT PROOF ROLL WET OR SATURATED SUBGRADES; RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES AS DIRECTED BY ENGINEER OR OWNER REPRESENTATIVE, WITHOUT ADDITIONAL COMPENSATION.

C. EXECUTION

- CONTRACTOR SHALL LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE; DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER UNLESS PERMISSION IS GRANTED. NOTIFY OWNER AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.
- REMOVE OBSTRUCTIONS, TREES, SHRUBS, AND OTHER VEGETATION AS REQUIRED FOR NEW CONSTRUCTION. STRIP TOPSOIL TO DEPTH AS REQUIRED IN THE FIELD TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. STOCKPILE TOPSOIL AWAY FROM EXCAVATIONS WITHOUT INTERMINGLING WITH SUBSOIL AND GRADE STOCKPILES TO DRAIN SURFACE WATER.
- REMOVE EXISTING ABOVE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND NECESSARY TO FACILITATE NEW CONSTRUCTION.
- PROTECT SUBGRADES AND FOUNDATION SOILS FROM FREEZING TEMPERATURES, FROST, AND PONDING WATER.
- EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS FOR ALL STRUCTURES, WALKS, PAVEMENTS, AND UTILITY TRENCHES.
- CONTRACTOR SHALL FURNISH AND OPERATE ALL DETERIORATING MEASURES REQUIRED TO FACILITATE NEW CONSTRUCTION AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- PROOF ROLL SUBGRADE BELOW BUILDING PAVEMENTS WITH A PNEUMATIC-TIRED DUMP TRUCK TO IDENTIFY SOFT SPOTS AND AREAS OF EXCESS YIELDING. DO NOT PROOF ROLL WET OR SATURATED SUBGRADES; RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES AS DIRECTED BY ENGINEER OR OWNER REPRESENTATIVE, WITHOUT ADDITIONAL COMPENSATION.
- BACKFILL ALL UTILITY TRENCHES BENEATH PAVEMENT (AND WITHIN 5') WITH GRANULAR MATERIAL.
- SOIL FILL: USE SATISFACTORY SOIL MATERIAL UNDER ALL WALKS, PAVEMENTS, STEPS, RAMPS, BUILDING SLABS, FOOTINGS, AND FOUNDATIONS.
- UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL SOIL LAYER BEFORE COMPACTION TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT. DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT EXCEEDS OPTIMUM MOISTURE CONTENT BY 2 PERCENT AND IS TOO WET TO COMPACT TO SPECIFIED UNIT WEIGHT.
- COMPACTION OF SOIL BACKFILLS AND FILLS ARE TO BE IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. WHERE NO GEOTECHNICAL REPORT EXISTS, COMPACT ALL FILL MATERIAL BELOW STRUCTURES, PAVEMENTS, WALKS, UTILITY TRENCHES AND STEPS (AND WITHIN 5 FEET OF SLOPE AREAS) TO 98 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557 (MODIFIED PROCTOR DENSITY) OR 95 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR DENSITY). COMPACT ALL FILL MATERIALS BELOW TURF OR UNPAVED AREAS TO 90 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-698 (STANDARD PROCTOR DENSITY) OR 85 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR DENSITY). ALL FILL MATERIALS TO BE COMPACTED IN MAXIMUM 8-INCH LIFTS.
- SITE ROUGH GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING. FINISH SUBGRADES TO RECONSTRUCT TO THE FOLLOWING TOLERANCES:
 - TURF OR UNPAVED AREAS: PLUS OR MINUS 1/4 INCH
 - WALKS: PLUS OR MINUS 1/2 INCH
 - PAVEMENTS: PLUS OR MINUS 1/2 INCH
 - INSIDE BUILDING LINES: FINISH SUBGRADE TO A TOLERANCE OF 1/4 INCH WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE.
- QUALITY CONTROL: QUALIFIED GEOTECHNICAL ENGINEER TO BE ENGAGED AS TESTING AGENCY AS DIRECTED BY OWNER.
- REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER.

STORM SEWER (CONT.):

C. EXECUTION

- INSTALL PIPING BEGINNING AT LOW POINT, TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. PLACE BELL ENDS OF PIPING FACING UPSTREAM. INSTALL GASKETS, SEALS, SLEEVES, AND OTHER COUPLINGS ACCORDING TO MANUFACTURERS WRITTEN INSTRUCTIONS.
- WHEN INSTALLING PIPE UNDER STREETS OR OTHER OBSTRUCTIONS THAT CANNOT BE DISTURBED, USE PIPE-JACKING PROCESS OF MICRO-TUNNELING.
- INSTALL PIPING PITCHED DOWN IN DIRECTION OF FLOW. INSTALL PVC PIPING ACCORDING TO ASTM D 2321 AND ASTM F 1668. INSTALL REINFORCED CONCRETE SEWER PIPING IN ACCORDANCE WITH ASTM C 1479 AND ACPA'S "CONCRETE PIPE INSTALLATION MANUAL."
- PIPE JOINT CONSTRUCTION: JOIN REINFORCED CONCRETE PIPE ACCORDING TO ACPA'S "CONCRETE PIPE INSTALLATION MANUAL" FOR RUBBER-GASKETED JOINTS. JOIN DISSIMILAR PIPE MATERIALS WITH NON-PRESSURE TYPE FLEXIBLE COUPLINGS.
- CONTRACTOR TO INSPECT INTERIOR OF PIPING AND MANHOLES FOR DEFECTS. DEFECTS REQUIRING CORRECTION INCLUDE THE FOLLOWING:
 - ALIGNMENT: LESS THAN FULL DIAMETER OF INSIDE OF PIPE IS VISIBLE BETWEEN STRUCTURES.
 - DEFLECTION: FLEXIBLE PIPING WITH DEFLECTION THAT PREVENTS PASSAGE OF BALL OR CYLINDER OF SIZE NOT LESS THAN 92.5 PERCENT OF PIPING DIAMETER.
 - DAMAGE: CRUSHED, BROKEN, CRACKED, OR OTHERWISE DAMAGED PIPING.
 - INFILTRATION: WATER LEAKAGE INTO PIPING.
 - EXFILTRATION: WATER LEAKAGE FROM OR AROUND PIPING.
 - REPLACE DEFECTIVE PIPING USING NEW MATERIALS, AND REPEAT INSPECTION UNTIL DEFECTS ARE WITHIN ALLOWANCES SPECIFIED.
- TEST NEW PIPING SYSTEMS, AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED, REPAIRED, FOR LEAKS AND DEFECTS FOR GRAVITY FLOW STORM DRAINAGE PIPING: TEST ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, UNI-B-6, AND THE FOLLOWING:
 - EXCEPTION: PIPING WITH SPLIT JOINTS UNLESS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
 - TEST METHOD: TEST ACCORDING TO ASTM F 1417
 - OPTION: TEST CONCRETE PIPING ACCORDING TO ASTM C 924
- SUBMIT TESTING REPORTS AS REQUIRED BY OWNER OR AUTHORITY HAVING JURISDICTION.

ASPHALT PAVING:

A. GENERAL

- THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.
- USE MATERIALS AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS.

B. PRODUCTS

- AGGREGATES
 - COURSE AGGREGATE: ASTM D 692/D929, SLAND; ANGULAR CRUSHED STONE.
 - CRUSHED GRAVEL, OR CURED, CRUSHED BLAST-FURNACE SLAG.
 - FINE AGGREGATE: ASTM D 1073 OR AASHTO M 29, SHARP-EDGED NATURAL SAND OR SAND PREPARED FROM STONE, GRAVEL, CURED BLAST-FURNACE SLAG, OR COMBINATIONS THEREOF.
 - FOR HOT-MIX ASPHALT: USE NATURAL SAND TO A MAXIMUM OF 20 PERCENT BY WEIGHT OF THE TOTAL AGGREGATE MASS.
 - MINERAL FILLER: ASTM D 242 OR AASHTO M 17, ROCK OR SLAG DUST, HYDRAULIC CEMENT, OR OTHER INERT MATERIAL.
- ASPHALT MATERIALS
 - ASPHALT BINDER: AASHTO M 320, PG 58-28 (58H-28 FOR SURFACE) OR AS OTHERWISE RECOMMENDED BY INDOT STANDARDS
 - ASPHALT CEMENT: PER INDOT STANDARDS (NO SLAG)
 - OUTBACK PRIME COAT: PER INDOT STANDARDS (NO SLAG)
 - EMULSIFIED ASPHALT PRIME COAT: PER INDOT STANDARDS (NO SLAG)
 - WATER: POTABLE.
 - UNDERSEALING ASPHALT: ASTM D 3141; PUMPING CONSISTENCY.
- AUXILIARY MATERIALS
 - RECYCLED MATERIALS FOR HOT-MIX ASPHALT MIXES: RECLAIMED, UNBOUND AGGREGATE BASE MATERIAL; AND RECYCLED ASPHALT SHINGLES FROM SOURCES AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS; EQUAL TO PERFORMANCE OF REQUIRED HOT-MIX ASPHALT PAVING PRODUCED FROM ALL NEW MATERIALS. NO RECLAIMED ASPHALT PAVEMENT (RAP).
 - HERBICIDE: COMMERCIAL CHEMICAL FOR WEED CONTROL, REGISTERED BY THE EPA, AND NOT CLASSIFIED AS "RESTRICTED USE" FOR LOCATIONS AND CONDITIONS OF APPLICATION. PROVIDE IN GRANULAR, LIQUID, OR WETTABLE POWDER FORM.
 - SAND: ASTM D 1073 OR AASHTO M 29, GRADE NO. 2 OR NO. 3.
- MIXES
 - RECYCLED CONTENT OF HOT-MIX ASPHALT: PER INDOT STANDARDS
 - RECYCLED CONTENT OF DENSE-GRADED, HOT-LAND, HOT-MIX ASPHALT PLANT MIXES APPROVED BY INDOT AND COMPLYING WITH THE FOLLOWING REQUIREMENTS:
 - PROVIDE MIXES WITH A HISTORY OF SATISFACTORY PERFORMANCE IN GEOGRAPHICAL AREA WHERE PROJECT IS LOCATED.
 - BASE COURSE: 2.5% OR MORE OR 19.0 MM (AS INDICATED ON DRAWINGS)
 - SURFACE COURSE: 9.5MM

C. EXECUTION

- EXAMINATION
 - VERIFY THAT SUBGRADE IS DRY AND IN SUITABLE CONDITION TO BEGIN PAVING.
 - PROOF-ROLL SUBGRADE BELOW PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT SPOTS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES. PROOFROLL TO BE PERFORMED BY QUALIFIED GEOTECHNICAL ENGINEER.
 - COMPLETELY PROOF-ROLL SUBGRADE IN ONE DIRECTION UNIL VEHICLE SPEED TO 3 MPH.
 - PROOF ROLL WITH A LOADED 10-WHEEL, TANDEN-AXLE DUMP TRUCK WEIGHING NOT LESS THAN 15 TONS.
 - EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS, AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY ENGINEER, AND REPLACE WITH COMPACTED BACKFILL OR FILL AS DIRECTED.
 - PROCEED WITH PAVING ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- SURFACE PREPARATION
 - IMMEDIATELY BEFORE PLACING ASPHALT MATERIALS, REMOVE LOOSE AND DELETERIOUS MATERIAL FROM SUBSTRATE SURFACES. ENSURE THAT PREPARED SUBGRADE IS READY TO RECEIVE PAVING.
 - HERBICIDE TREATMENT: APPLY HERBICIDE ACCORDING TO MANUFACTURER'S RECOMMENDED RATES AND WRITTEN APPLICATION INSTRUCTIONS. APPLY TO DRY, PREPARED SUBGRADE OR SURFACE OF COMPACTED-AGGREGATE BASE BEFORE APPLYING PAVING MATERIALS.
 - MIX HERBICIDE WITH PRIME COAT IF FORMULATED BY MANUFACTURER FOR THAT PURPOSE
 - CUTBACK PRIME COAT: APPLY UNIFORMLY OVER SURFACE OF COMPACTED UNBOUND-AGGREGATE BASE COURSE AT A RATE OF 0.15 TO 0.50 GAL./SQ. YD. APPLY ENOUGH MATERIAL TO PENETRATE AND SEAL, BUT NOT FLOOD, SURFACE. ALLOW PRIME COAT TO CURE.
 - IF PRIME COAT IS NOT ENTIRELY ABSORBED WITHIN 24 HOURS AFTER APPLICATION, SPREAD SAND OVER SURFACE TO BLOT EXCESS ASPHALT. USE ENOUGH SAND TO PREVENT PICKUP UNDER TRAFFIC. REMOVE LOOSE SAND BY SWEEPING BEFORE PAVEMENT IS PLACED AND AFTER VOLATILES HAVE EVAPORATED.
 - PROTECT PRIMED SUBSTRATE FROM DAMAGE UNTIL READY TO RECEIVE PAVING.
 - TACK COAT: APPLY UNIFORMLY TO SURFACES OF EXISTING PAVEMENT AT A RATE OF 0.05 TO 0.15 GAL./SQ. YD.
 - ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING.
 - AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.
- CURING HOT-MIX ASPHALT
 - MACHINE PLACE HOT-MIX ASPHALT ON PREPARED SURFACE, SPREAD UNIFORMLY, AND STRIKE OFF. PLACE ASPHALT MIX BY HAND IN AREAS INACCESSIBLE TO EQUIPMENT IN A MANNER THAT PREVENTS SEGREGATION. MIX. PLACE EACH COURSE TO REQUIRED GRADE, CROSS SECTION, AND THICKNESS WHEN COMPLETED.
 - PLACE HOT-MIX ASPHALT BASE COURSE IN NUMBER OF LIFTS AND THICKNESSES INDICATED.
 - PLACE HOT-MIX ASPHALT SURFACE COURSE IN SINGLE LIFT.
 - SPREAD MIX AT A MINIMUM TEMPERATURE OF 250 DEG F.
 - BEGIN APPLYING MIX ALONG CENTERLINE OF CROWN FOR CROWNED SECTIONS AND ON HIGH SIDE OF ONE-WAY SLOPES UNLESS OTHERWISE INDICATED.
 - REGULATE PAVING MACHINE SPEED TO OBTAIN SMOOTH, CONTINUOUS SURFACE FREE OF PULLS AND TEARS IN ASPHALT-PAVING MAT.
 - PLACE PAVING IN CONSECUTIVE STRIPS NOT LESS THAN 10 FEET WIDE UNLESS INFILL EDGE STRIPS OF A LESSER WIDTH ARE REQUIRED.
 - AFTER FIRST STRIP HAS BEEN PLACED AND ROLLED, PLACE SUCCEEDING STRIPS AND EXTEND ROLLING TO OVERLAP PREVIOUS STRIPS. OVERLAP MIX PLACEMENT ABOUT 1 TO 1-1/2 INCHES FROM STRIP TO STRIP TO ENSURE PROPER COMPACTION OF MIX ALONG LONGITUDINAL JOINTS.
 - COMPLETE A SECTION OF ASPHALT BASE COURSE BEFORE PLACING ASPHALT SURFACE COURSE.
 - PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAYER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.
- JOINTS
 - CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAVING SECTIONS. CONSTRUCT JOINTS FREE OF DEPRESSIONS, WITH SAME TEXTURE AND SMOOTHNESS AS OTHER SECTIONS OF HOT-MIX ASPHALT COURSE.
 - CLEAN CONTACT SURFACES AND APPLY TACK COAT TO JOINTS.
 - OFFSET LONGITUDINAL JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 6 INCHES
 - OFFSET TRANSVERSE JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 24 INCHES
 - CONSTRUCT TRANSVERSE JOINTS AT EACH POINT WHERE PAYER ENDS A DAY'S WORK AND RESUMES WORK AT A SUBSEQUENT TIME. CONSTRUCT THESE JOINTS USING EITHER "BULKHEAD" OR "PAPERED" METHOD ACCORDING TO AI MS-22, FOR BOTH "ENDING A LANE" AND "RESUMPTION OF PAVING OPERATIONS."
 - COMPACT JOINTS AS SOON AS HOT-MIX ASPHALT WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT.

ASPHALT PAVING (CONT.):

5. COMPACTION

- GENERAL: BEGIN COMPACTION AS SOON AS PLACED HOT-MIX PAVING WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. COMPACT HOT-MIX PAVING WITH HOT, HAND TAMPERS OR WITH VIBRATORY-PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS.
 - COMPLETE COMPACTION BEFORE MIX TEMPERATURE COOLS TO 185 DEG F
- BREAKDOWN ROLLING: COMPLETE BREAKDOWN OR INITIAL ROLLING IMMEDIATELY AFTER ROLLING JOINTS AND OUTSIDE EDGE. EXAMINE SURFACE IMMEDIATELY AFTER BREAKDOWN ROLLING FOR INDICATED CROWN, GRADE, AND SMOOTHNESS: CORRECT LAYOUT AND ROLLING OPERATIONS TO COMPLY WITH REQUIREMENTS.
- INTERMEDIATE ROLLING: BEGIN INTERMEDIATE ROLLING IMMEDIATELY AFTER BREAKDOWN ROLLING WHILE HOT-MIX ASPHALT IS STILL HOT ENOUGH TO ACHIEVE SPECIFIED DENSITY. CONTINUE ROLLING UNTIL HOT-MIX ASPHALT COURSE HAS BEEN UNIFORMLY COMPACTED TO THE FOLLOWING DENSITY:
 - AVERAGE DENSITY: 96 PERCENT OF REFERENCE LABORATORY DENSITY ACCORDING TO ASTM D 6927 OR AASHTO T 245, BUT NOT LESS THAN 94 PERCENT OR GREATER THAN 100 PERCENT.
 - AVERAGE DENSITY: 92 PERCENT OF REFERENCE MAXIMUM THEORETICAL DENSITY ACCORDING TO ASTM D 2041, BUT NOT LESS THAN 90 PERCENT OR GREATER THAN 96 PERCENT.
- FINISH ROLLING: FINISH ROLL PAVED SURFACES TO REMOVE ROLLER MARKS WHILE HOT-MIX ASPHALT IS STILL WARM.
- EDGE SHAPING: WHILE SURFACE IS BEING COMPACTED AND FINISHED, TRIM EDGES OF PAVEMENT TO PROPER ALIGNMENT. BEVEL EDGES WHILE ASPHALT IS STILL HOT; COMPACT THOROUGHLY.
- REPAIRS: REMOVE PAVED AREAS THAT ARE DEFECTIVE OR CONTAMINATED WITH FOREIGN MATERIALS AND REPLACE WITH FRESH, HOT-MIX ASPHALT. COMPACT BY ROLLING TO SPECIFIED DENSITY AND SURFACE SMOOTHNESS.
- PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND SMOOTHNESS IS ACCEPTABLE.
- ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.

6. INSTALLATION TOLERANCES

- PAVEMENT THICKNESS: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN THE FOLLOWING TOLERANCES:
 - BASE COURSE: PLUS OR MINUS 1/2 INCH
 - SURFACE COURSE: PLUS 1/4 INCH NO MINUS.
- PAVEMENT SURFACE SMOOTHNESS: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS:
 - BASE COURSE: 1/4 INCH
 - SURFACE COURSE: 1/8 INCH
- CROWNED SURFACES: PAVING WITH CROWNED TEMPLATE CENTERED AND AT RIGHT ANGLE TO CROWN. MAXIMUM ALLOWABLE VARIANCE FROM TEMPLATE IS 1/4 INCH

7. FIELD QUALITY CONTROL

- TESTING AGENCY: CONTRACTOR TO ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.
- THICKNESS: IN-PLACE COMPACTED THICKNESS OF HOT-MIX ASPHALT COURSES WILL BE DETERMINED ACCORDING TO ASTM D 1549 AND ASTM D 2726.
- SURFACE SMOOTHNESS: FINISHED SURFACE OF EACH HOT-MIX ASPHALT COURSE WILL BE TESTED FOR COMPLIANCE WITH SMOOTHNESS TOLERANCES.
- IN-PLACE DENSITY: TESTING AGENCY WILL TAKE SAMPLES OF UNCOMPACTED PAVING MIXTURES AND COMPACTED PAVEMENT ACCORDING TO ASTM D 975 OR AASHTO T 168.
 - REFERENCE MAXIMUM THEORETICAL DENSITY WILL BE DETERMINED BY AVERAGING RESULTS FROM FOUR SAMPLES OF HOT-MIX ASPHALT-PAVING MIXTURE DELIVERED DAY TO SITE, PREPARED ACCORDING TO ASTM D 2041, AND COMPACTED ACCORDING TO JOB-MIX SPECIFICATIONS.
 - IN-PLACE DENSITY OF COMPACTED PAVEMENT WILL BE DETERMINED BY TESTING CORE SAMPLES ACCORDING TO ASTM D 1549 AND ASTM D 2726.
 - ONE CORE SAMPLE WILL BE TAKEN FOR EVERY 1000 SQ. YD. OR LESS OF INSTALLED PAVEMENT, WITH NO FEWER THAN THREE CORES TAKEN.
 - FIELD DENSITY OF IN-PLACE COMPACTED PAVEMENT MAY ALSO BE DETERMINED BY NUCLEAR METHOD ACCORDING TO ASTM D 1549 AND ASTM D 2726.
 - REPLACE AND COMPACT HOT-MIX ASPHALT WHERE CORE TESTS WERE TAKEN.
 - REMOVE AND REPLACE OR INSTALL ADDITIONAL HOT-MIX ASPHALT WHERE TEST RESULTS OR MEASUREMENTS INDICATE THAT IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS.

CONCRETE PAVING:

A. GENERAL

- CONCRETE PAVING SECTION INCLUDES DRIVEWAYS, ROADWAYS, PARKING LOTS, CURBS AND GUTTERS, WALKS, AND CONCRETE APRONS.
- ACTION SUBMITTALS
 - PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
 - OTHER ACTION SUBMITTALS
 - DESIGN MIXTURES: FOR EACH CONCRETE PAVING MIXTURE, INCLUDE ALTERNATE DESIGN MIXTURES WITH CHARACTERISTICS OF MATERIALS PROJECT CONDITIONS, WEATHER, TEST RESULTS, OR OTHER FACTORS WARRANT ADJUSTMENT.
 - MATERIAL TEST REPORTS: FROM A QUALIFIED TESTING AGENCY INDICATING AND INTERPRETING TEST RESULTS FOR COMPLIANCE OF THE FOLLOWING WITH REQUIREMENTS INDICATED, BASED ON COMPREHENSIVE TESTING OF CURRENT MATERIALS.
- QUALITY ASSURANCE
 - READY-MIX-CONCRETE MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING READY-MIXED CONCRETE PRODUCTS AND THAT COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT.
 - ACI PUBLICATIONS: COMPLY WITH ACI 301 (ACI 301M) UNLESS OTHERWISE INDICATED.
 - HANDICAP STANDARDS: PROVIDE RAMPS IDENTIFIED FOR HANDICAP ACCESS IN ACCORDANCE WITH ANS A117 AND FEDERAL AMERICANS WITH DISABILITIES ACT (ADA).

B. PRODUCTS

- STEEL REINFORCEMENT
 - RECYCLED CONTENT: POST CONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT NOT LESS THAN 25 PERCENT.
 - PLAIN-STEEL WELDED WIRE REINFORCEMENT: ASTM A 185/A 185M, FABRICATED FROM AS-DRAWN STEEL WIRE INTO FLAT SHEETS.
 - DEFORMED-STEEL WELDED WIRE REINFORCEMENT: ASTM A 497/A 497M, FLAT SHEET.
 - REINFORCING BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420); DEFORMED.
 - PLAIN-STEEL WIRE: ASTM A 92/A 92M, AS DRAWN.
 - DEFORMED-STEEL WIRE: ASTM A 496/A 496M.
 - DOWNEL BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420) PLAIN-STEEL BARS; ZINC COATED (GALVANIZED) AFTER FABRICATION ACCORDING TO ASTM A 767/A 767M, CLASS 1 COATING. CUT BARS TRUE TO LENGTH WITH FREE OF DEFECTS AND NOT LESS THAN 8 PERCENT RETAINED ON A INDIVIDUAL SIEVE, EXPECT THAT LESS THAN 8 PERCENT MAY BE RETAINED ON COARSEST SIEVE AND ON NO. 50 SIEVE, AND LESS THAN 8 PERCENT MAY BE RETAINED ON SIEVES FINER THAN NO. 50.
 - WATER: POTABLE AND COMPLYING WITH ASTM C 94/C 94M.
 - AIR-ENTRAINING ADMIXTURE: ASTM C 260.
 - CHEMICAL ADMIXTURES: ADMIXTURES CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES AND TO CONTAIN NOT MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF CEMENTITIOUS MATERIAL.
 - NOTE: WHERE CLASS A, B, OR C CONCRETE IS REFERENCE IN PLANS OR SPECIFICATIONS, THE CLASS IS AS DEFINED IN ACI 347-4.
- CURING MATERIALS
 - ABSORPTIVE COVER: AASHTO M 182, CLASS 3, BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ./SQ. YD. (305 G/SQ. M) DRY.
 - MOISTURE-RETAINING COVER: ASTM C 171, POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE SHEET.
 - WATER: POTABLE.
 - EVAPORATION RETARDER: WATERBORNE, MONOMOLECULAR, FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
 - CLEAR, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 1, CLASS B, DISSIPATING.
 - WHITE, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 2, CLASS B, DISSIPATING.
- FIBER REINFORCEMENT
 - FIBROUS REINFORCEMENT: 100% VIRGIN HOMOPOLYMER POLYPROPYLENE MULTIFILAMENT FIBERS FOR SECONDARY REINFORCEMENT OF CONCRETE, ASTM C 116, TYPE III. SHALL CONTAIN NO REPROCESSED OLEFIN MATERIALS.
 - PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING: FIBERMESH 150; PROPEX CONCRETE SYSTEMS CORP., STEALTH FIBER MICRO REINFORCEMENT; OR CONCRETE SYSTEMS, OR APPROVED EQUAL.
- RELATED MATERIALS
 - WAT FILLERS: ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER OR ASTM D 1752, CORK OR SELF-EXPANDING CORK IN PREFORMED STRIPS.
 - PENETRATING ANTI-SPALLING SEALER: THE SEALER SHALL BE A SILANE WATER BASED COMPOUND WHICH HAS A 96% CHLORIDE-ION SCREEN AND A REPELLENCY FACTOR OF 92% WHEN TESTED IN ACCORDANCE WITH NCHRP #244, TEST METHOD. IN ADDITION, THE SEALER-TREATED CONCRETE MUST EXHIBIT NO SCALING WHEN EXPOSED TO 120 CYCLES OF FREEZING-AND-THAWING IN ACCORDANCE WITH ASTM C 672.
 - PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING: "WEATHER WORKER HEAVY-DUTY WB" (J-27 WB); DAYTON SUPERIOR CORP., "ENVIROSEAL 20"; HYDROZON INCORP., "PENTANE WB"; L & M CONSTRUCTION CHEMICALS, INC.
- CONCRETE MIXTURES
 - PREPARE DESIGN MIXTURES, PROPORTIONED ACCORDING TO ACI 301 (ACI 301M), WITH THE FOLLOWING PROPERTIES:

CONCRETE PAVING (CONT.):

- COMPRESSIVE STRENGTH (28 DAYS): 4000 PSI (27.6 MPa).
- SLUMP LIMIT: 5 INCHES (125 MM) PLUS OR MINUS 1 INCH (25 MM)
- AIR CONTENT: 6.5 PERCENT PLUS OR MINUS 1.5 PERCENT.

ii. CHEMICAL ADMIXTURES: USE ADMIXTURES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

7. CONCRETE MIXING

- READY-MIXED CONCRETE: MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE ACCORDING TO ASTM C 94/C 94M. FURNISH BATCH CERTIFICATES FOR EACH BATCH DISCHARGED AND USED IN THE WORK.

B. EXECUTION

- EXAMINATION AND PREPARATION
 - PROOF-ROLL PREPARED SUBBASE SURFACE BELOW CONCRETE PAVING TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING.
 - REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.
- EDGE FORMS AND SCREED CONSTRUCTION
 - SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.
- STEEL REINFORCEMENT
 - GENERAL: COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.
- JOINTS
 - GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGES TRUE TO LINE, WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED.
 - CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVING AND AT LOCATIONS WHERE PAVING OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVING TERMINATES AT ISOLATION JOINTS.
 - ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, OTHER FIXED OBJECTS, AND WHERE INDICATED.
 - CONSTRUCTION JOINTS: FORM WEAKENED-JOINT CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS.
 - EDGES: FORM AND RECORD TOOL EDGES OF PAVING, GUTTERS, CURBS, AND JOINTS IN CONCRETE WITH AN EDGING TOOL TO A 1/4-INCH (6-MM) RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE EDGING-TOOL MARKS ON CONCRETE SURFACES.
- CONCRETE PLACEMENT
 - MOISTEN SUBBASE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED.
 - COMPLY WITH ACI 301 (ACI 301M) REQUIREMENTS FOR MEASURING, MIXING, TRANSPORTING, PLACING, AND CONSOLIDATING CONCRETE.
 - DEPOSIT AND SPREAD CONCRETE IN A CONTINUOUS OPERATION BETWEEN TRANSVERSE JOINTS. DO NOT PUSH OR DRAG CONCRETE INTO PLACE OR USE VIBRATORS TO MOVE CONCRETE INTO PLACE.
 - SCREED PAVING SURFACE WITH A STRAIGHTEDGE AND STRIKE OFF.
 - COMMENCE WITH DRAGGING BULL FLOATS OR DARBES TO IMPART AN OPEN-TEXTURED AND UNIFORM SURFACE PLANE BEFORE EXCESS MOISTURE OR BLEED WATER APPEARS ON THE SURFACE. DO NOT FURTHER DISTURB CONCRETE SURFACES BEFORE BEGINNING FINISHING OPERATIONS OR SPREADING SURFACE TREATMENTS.
- CONCRETE PROTECTION AND CURING
 - GENERAL: PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES.
 - COMPLY WITH ACI 306.1 FOR COLD-WEATHER PROTECTION.
 - EVAPORATION RETARDER: APPLY EVAPORATION RETARDER TO CONCRETE SURFACES IF HOT, DRY, OR WINDY CONDITIONS CAUSE MOISTURE LOSS APPROXCHING 0.2 LB/SQ. FT. X H (1 KG/SQ. M X H) BEFORE AND DURING FINISHING OPERATIONS. APPLY ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AFTER PLACING, SCREEDING, AND BULL FLOATING OR DARBING CONCRETE BUT BEFORE FLOOR FINISHING.
 - CURING: AFTER FINISHING CONCRETE BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE.
 - CURING METHODS: CURE CONCRETE BY MOISTURE CURING, MOISTURE-RETAINING-COVER CURING, CURING COMPOUND, OR A COMBINATION THEREOF.
 - PENETRATING, ANTI-SPALLING SEALER TREATMENT: APPLY COMPOUNDS TO CLEAN, DRY CONCRETE SURFACES FREE OF OIL, DIRT, AND OTHER FOREIGN MATERIAL ACCORDING TO MANUFACTURER'S SPECIFICATIONS. SEALER TO BE APPLIED TO ALL EXTERIOR CONCRETE PAVING AND CURBS AFTER CONCRETE CURED 28 DAYS.
- PAVING TOLERANCES
 - COMPLY WITH TOLERANCES IN ACI 117 AND AS FOLLOWS:
 - ELEVATION: 3/4 INCH (19 MM).
 - THICKNESS: PLUS 3/8 INCH (10 MM), MINUS 1/4 INCH (6 MM).
 - SURFACE: GAP BELOW 10-FOOT- (3-M)-LONG, UNLEVELLED STRAIGHTEDGE NOT TO EXCEED 1/2 INCH (13 MM).
 - JOINT SPACING: 3 INCHES (75 MM).
 - CONTRACTION JOINT DEPTH: PLUS 1/4 INCH (6 MM), NO MINUS.
 - JOINT WIDTH: PLUS 1/8 INCH (3 MM), NO MINUS.
 - APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE DIMENSIONS INDICATED WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS (0.4 MM).
- REPAIRS AND PROTECTION
 - REMOVE AND REPLACE CONCRETE PAVING THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION. REMOVE WORK IN COMPLETE SECTIONS FROM JOINT TO JOINT UNLESS OTHERWISE APPROVED BY ENGINEER.
 - PROTECT CONCRETE PAVING FROM DAMAGE EXCEPT FROM PAVING FOR AT LEAST 14 DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN PAVING AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGE OF MATERIALS AS THEY OCCUR.
 - MISCELLANEOUS CONCRETE, STORM SEWER, PLANT MATERIAL, UNDERGROUND CONDUITS, SITE LIGHTS, ETC., LOCATED ON SITE.
 - PROTECT FROM GRAFFITI.

DEMOLITION:

A. GENERAL

- THE CONTRACTOR SHALL REMOVE AND DISPOSE OFF SITE, ALL EXISTING STRUCTURES, FENCES, CONCRETE AND PAVEMENT ON SITE, UNLESS NOTED TO REMAIN ON THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL PROTECT AND NOT DESTROY PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.

B. SUMMARY

THIS SECTION REQUIRES REMOVAL AND DISPOSAL, OFF SITE, OF THE FOLLOWING:

- ASPHALT PARKING LOT.
- MISCELLANEOUS CONCRETE, STORM SEWER, PLANT MATERIAL, UNDERGROUND CONDUITS, SITE LIGHTS, ETC., LOCATED ON SITE.

C. SUBMITTALS

SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 1 SPECIFICATION SECTIONS.

- A PROPOSED SCHEDULE OF OPERATIONS COORDINATION FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED.
- PROVIDE A DETAILED SEQUENCE AND SCHEDULE OF DEMOLITION AND REMOVAL WORK TO BE COMPLETED.

D. JOB CONDITIONS

- SALVAGED MATERIALS: ITEMS OF SALVAGEABLE VALUE TO CONTRACTOR MAY BE REMOVED FROM STRUCTURE AS WORK PROGRESSES. TRANSPORT SALVAGED ITEMS FROM THE SITE AS THEY ARE REMOVED.
- STORAGE OR SALE OF REMOVED ITEMS WILL NOT BE PERMITTED ON SITE.
- EXPLOSIVES: USE OF ANY TYPE OF EXPLOSIVES WILL NOT BE PERMITTED.
- TRAFFIC: CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
- WITHOUT PERMISSION FROM THE LOCAL AUTHORITIES HAVING JURISDICTION, PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY GOVERNING AUTHORITIES.
- PROTECTIONS: ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND OTHER FACILITIES AND TO PERSONS.
- DAMAGES: PROMPTLY REPAIR ANY DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS.
- UTILITY SERVICES: MAINTAIN EXISTING UTILITIES TO STAY IN SERVICE AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DISCONNECT, CAP AND REMOVE UTILITY SERVICES PER LOCAL REQUIREMENTS. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTIONS HAVE BEEN COMPLETED TO THE SATISFACTION OF LOCAL UTILITIES.

E. DEMOLITION

- BELOW-GRADE CONSTRUCTION: DEMOLISH FOUNDATION WALLS AND OTHER BELOW-GRADE CONSTRUCTION, INCLUDING CONCRETE SLABS, TO A DEPTH OF NOT LESS THAN 48 INCHES BELOW LOWEST FOUNDATION LEVEL.
- FILLING VOIDS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION STRUCTURES.

F. DISPOSAL OF DEMOLISHED MATERIALS

- DEMOLITION: REMOVE WEEKLY FROM SITE ACCUMULATED DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS.
- REMOVAL: TRANSPORT MATERIALS REMOVED FROM DEMOLITION OPERATIONS AND LEGALLY DISPOSE OF OFF-SITE.

WATER:

A. ALL WATER MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF HAMMOND STANDARDS AND SPECIFICATIONS, LATEST EDITION.

SANITARY:

A. ALL SANITARY MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPALITY STANDARDS AND SPECIFICATIONS, LATEST EDITION.

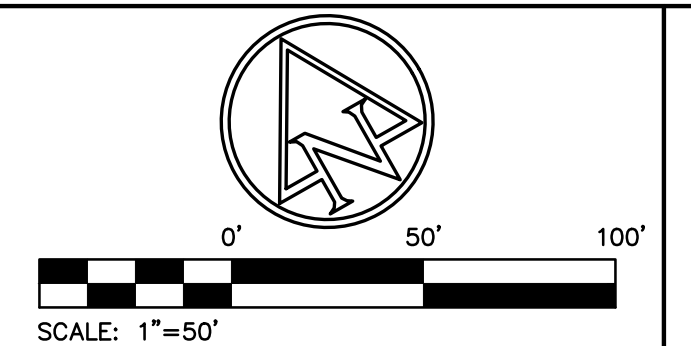
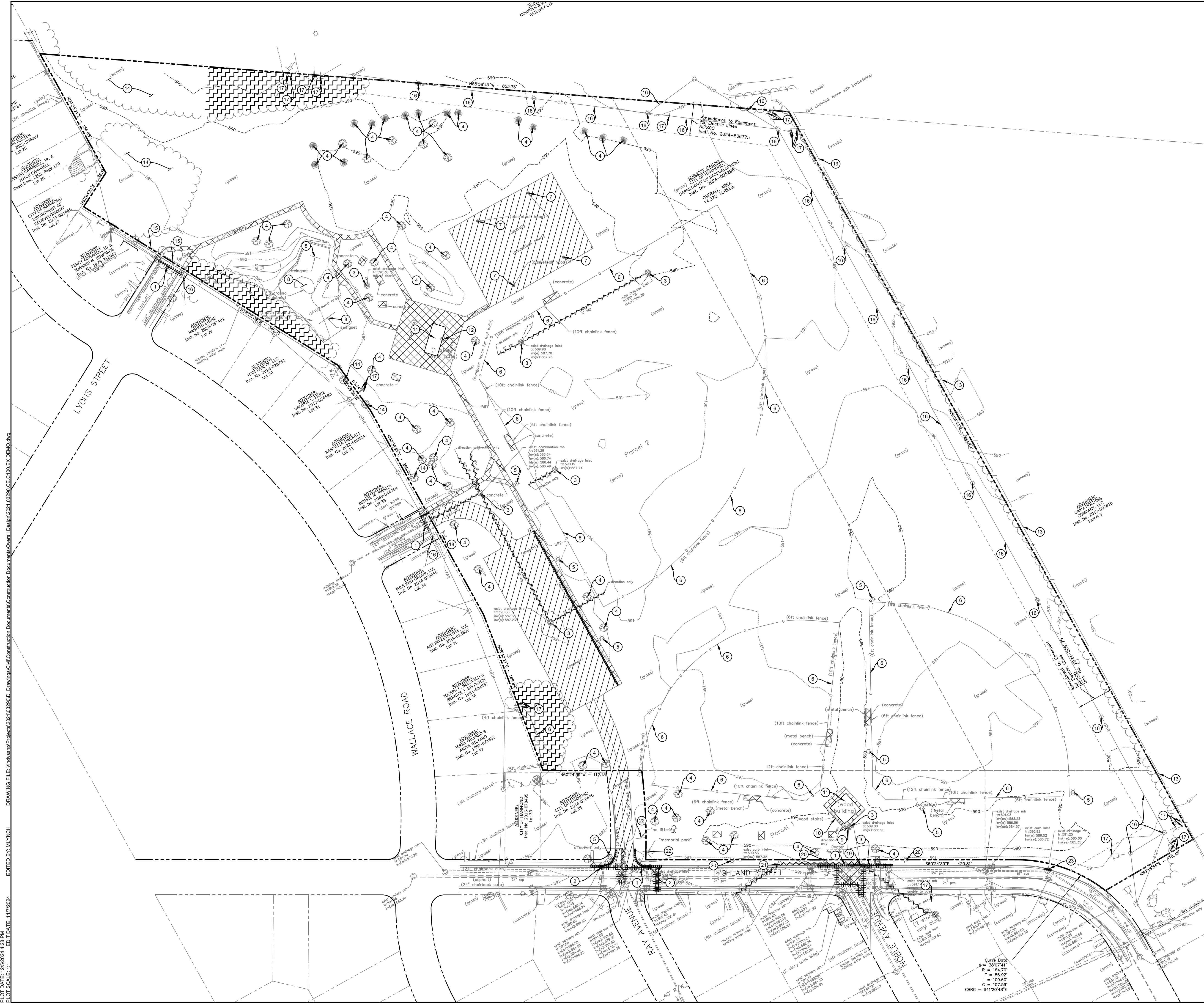
STORM SEWER:

A. GENERAL

- STORM SEWER INCLUDES ALL PIPES, FITTINGS, MANHOLES, CLEANOUTS, TRANSITION COUPLINGS, CATCH BASINS, INLETS, END SECTIONS, AND OUTLETS.
- THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.
- CONTRACTOR SHALL LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE; DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER UNLESS PERMISSION IS GRANTED. NOTIFY OWNER AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.

B. PRODUCTS

- PE PIPE AND FITTINGS: PE DRAINAGE PIPE AND FITTINGS NP 3 TO NPS 10, AASHTO M 252M, TYPE S, WITH SMOOTH WATERWAY FOR COUPLING JOINTS. PE DRAINAGE PIPE AND FITTINGS NPS 12 TO NPS 60, AASHTO M 294M, TYPE S, WITH SMOOTH WATERWAY FOR COUPLING JOINTS.
- PVC PIPE AND FITTINGS: PIPE: ASTM F 949, PVC, OR ASTM 0-3034, F-1336, F-679, CORRUGATED PIPE WITH BELL AND GASKETED JOINTS. FITTINGS: ASTM 949, PVC MOLDED OR FABRICATED, SOCKET TYPE GASKETS: ASTM F 477, ELASTOMERIC SEALS.
- CONCRETE PIPE AND FITTINGS: REINFORCED CONCRETE SEWER PIPE AND FITTINGS MEETING ASTM C 76 WITH BELL AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS. PIPE TO BE CLASS II UNLESS OTHERWISE INDICATED ON PLANS.
- COMPLY WITH ASTM C 1173, ELASTOMERIC SLEEVE-TYPE REDUCING OR TRANSITION COUPLING, FOR JO



- ### EXISTING LEGEND
- ⊕ Temporary Bench Mark
 - ⊙ Well
 - ⊕ Combination Pole
 - ⊕ Electric Meter Box
 - ⊕ Electric Box
 - ⊕ Gas Meter
 - ⊕ Gas Marker Sign
 - ⊕ Telephone Handhole
 - ⊕ Telephone Marker Sign
 - ⊕ Telephone Pole
 - ⊕ Telephone Pedestal
 - ⊕ Buried Electric Line
 - ⊕ Overhead Electric Line
 - ⊕ Buried Gas Line
 - ⊕ Buried Telephone Line
 - ⊕ Overhead Telephone Line
 - ⊕ Buried Water Line
 - ⊕ Beehive Inlet
 - ⊕ Curb Inlet
 - ⊕ Fire Hydrant
 - ⊕ Clean Out
 - ⊕ Tree
 - ⊕ Bush
 - ⊕ Stump
 - ⊕ Spigot
 - ⊕ Mailbox
 - ⊕ Pine
 - ⊕ Post
 - ⊕ Power Pole
 - ⊕ Sign
 - ⊕ Stand Pipe
 - ⊕ Existing Pond

- ### DEMOLITION LEGEND
- ⊕ EXISTING UTILITY TO BE REMOVED
 - ⊕ EXISTING CURB TO BE REMOVED
 - ⊕ PAVEMENT TO BE SAWCUT
 - ⊕ EXISTING CONCRETE AND BASE TO BE REMOVED
 - ⊕ EXISTING TREES/BRUSH TO BE REMOVED
 - ⊕ EXISTING ASPHALT TO BE REMOVED

- ### KEYNOTES
1. EXISTING ASPHALT PAVEMENT TO BE SAWCUT FOR A CLEAN EDGE.
 2. EXISTING STORM GRATE TO BE REPLACED BY FLAT GRATE. CONTRACTOR TO VERIFY CASTING TYPE BASED ON EXISTING STRUCTURE PRIOR TO CONSTRUCTION.
 3. EXISTING STORM/COMBINED STRUCTURE & PIPE TO BE REMOVED.
 4. EXISTING TREES/BRUSH TO BE REMOVED.
 5. EXISTING LIGHT POLE TO BE REMOVED.
 6. EXISTING FENCE TO BE REMOVED.
 7. EXISTING BASKETBALL HOOP TO BE REMOVED.
 8. EXISTING SWING SET/PLAYGROUND EQUIPMENT TO BE REMOVED.
 9. EXISTING WATER FOUNTAIN & ASSOCIATED SERVICE TO BE REMOVED. CONTRACTOR TO COORDINATE SERVICE LINE REMOVAL AND CAP WITH PROVIDER.
 10. EXISTING WOODEN STAIRS TO BE REMOVED.
 11. EXISTING BUILDING & FOUNDATION TO BE REMOVED.
 12. EXISTING ELECTRIC METER TO BE REMOVED. CONTRACTOR TO COORDINATE DISCONNECTION WITH UTILITY PROVIDER PRIOR TO CONSTRUCTION.
 13. EXISTING FENCE TO BE PROTECTED.
 14. EXISTING TREES/BRUSH TO BE PROTECTED.
 15. EXISTING GUARDRAIL BARRICADE TO BE REMOVED.
 16. PROTECT EXISTING UTILITY THROUGHOUT DURATION OF CONSTRUCTION. EXISTING UTILITY SIZE, TYPE, LOCATION & ELEVATION TO BE VERIFIED PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT ENGINEER AND OWNER IMMEDIATELY IF CONFLICT EXISTS.
 17. EXISTING GUY WIRES TO BE PROTECTED.
 18. EXISTING HYDRANT TO BE REMOVED & REUSED.
 19. EXISTING UTILITY POLE TO BE RELOCATED. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER PRIOR TO CONSTRUCTION.
 20. EXISTING LIGHT POLE TO BE RELOCATED. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER PRIOR TO CONSTRUCTION.
 21. EXISTING UTILITY/LIGHT POLE TO BE REMOVED. CONTRACTOR TO COORDINATE DISCONNECTION WITH UTILITY PROVIDER PRIOR TO CONSTRUCTION.
 22. EXISTING SIGN TO BE REMOVED.
 23. CONTRACTOR TO REMOVE AND REPLACE EXISTING CURB AND PAVEMENT AS NECESSARY TO MAKE THIS CONNECTION.

GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT & NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
2. CONTRACTOR TO VERIFY LOCATION, SIZE & DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.
3. SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

!! CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

CALL TOLL FREE "811" OR 1-800-382-5544
INDIANA UNDERGROUND



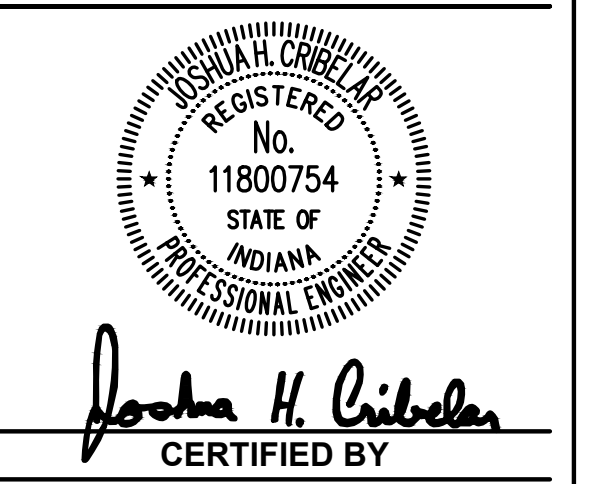
City of Hammond
Mayor Thomas M.
McDermott Jr.
5925 Calumet Avenue
Hammond, IN 46320

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STRUCTUREPOINT
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MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



ISSUANCE INDEX	
DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

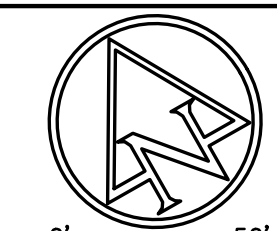
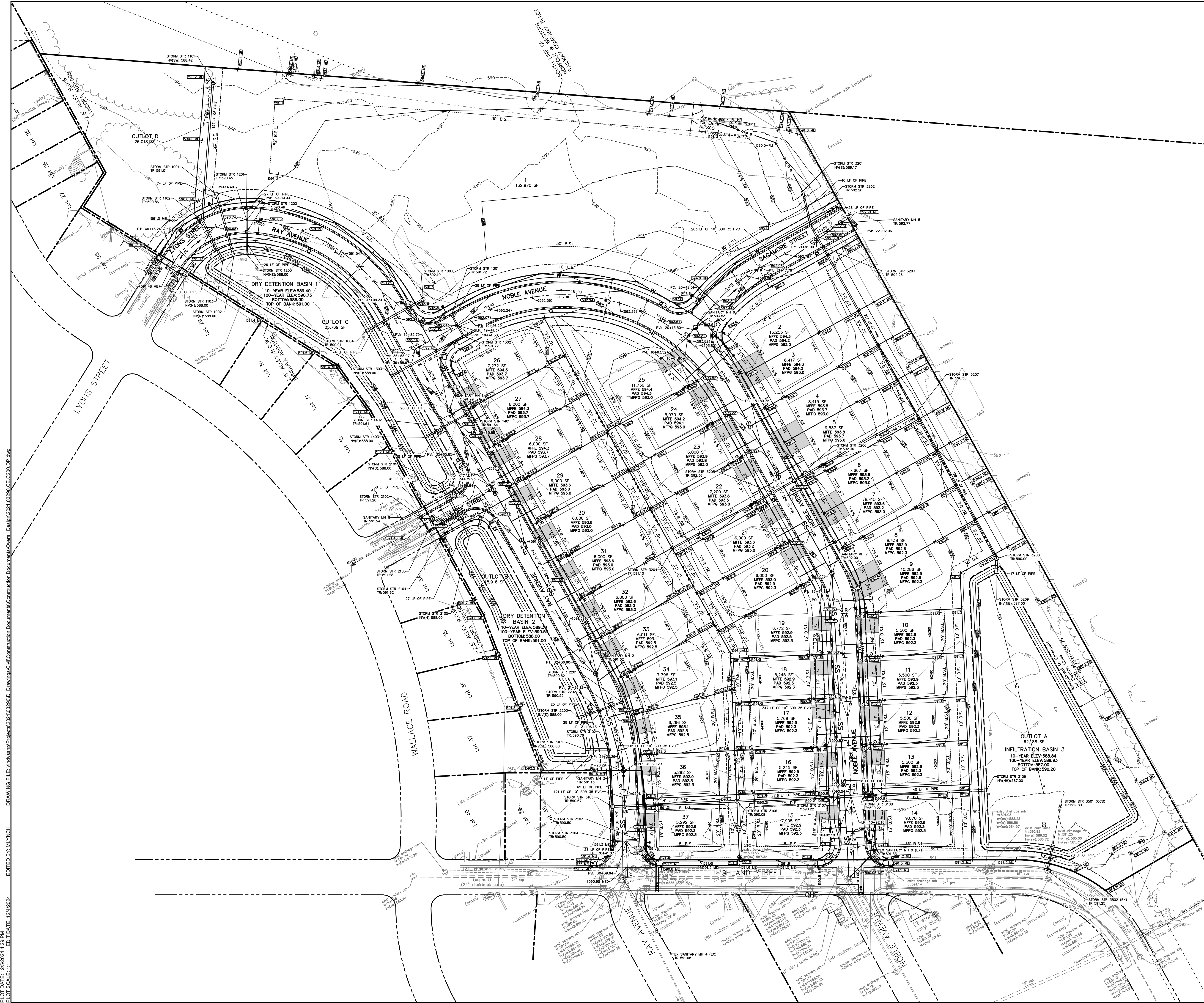
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

EXISTING TOPOGRAPHY & DEMOLITION PLAN

C100

DRAWING FILE: I:\indiana\p\projects\2021\03290\0 - Drawings\Civil\Construction Documents\Civil\0100 EX DEMO.dwg
EDITED BY: M.VNCH
PLOT DATE: 12/02/2024 4:28 PM
EDIT DATE: 11/27/2024



SCALE: 1"=50'

EXISTING LEGEND

- Temporary Bench Mark
- Well
- Combination Pole
- Electric Meter Box
- Electric Box
- Gas Meter
- Gas Marker Sign
- Guy Wire
- Telephone Handhole
- Telephone Marker Sign
- Telephone Pole
- Buried Fiber Optic
- Overhead Electric Line
- Buried Gas Line
- Buried Telephone Line
- Overhead Telephone Line
- Buried Water Line
- Beehive Inlet
- Curb Inlet
- Fire Hydrant
- Clean Out
- Tree
- Bush
- Stump
- Spigot
- Mailbox
- Pine
- Post
- Power Pole
- Sign
- Stand Pipe
- Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
- WET DETENTION POND NORMAL POOL
- LOT LINE
- WATER MAIN
- SS SANITARY MAIN
- SWALE
- 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- STORM SEWER
- OVERHEAD ELECTRIC
- FIRE HYDRANT & WATER VALVE
- WATER TEE, CROSS & BEND
- PROPOSED CONTOUR
- SPOT ELEVATION
- PAVEMENT ELEVATION
- FLOW ARROW
- SF SQUARE FEET
- B.S.L. BUILDING SETBACK LINE
- B/B BACK TO BACK
- D.E. DRAINAGE EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
- FL FLOWLINE
- HP/LP HIGH POINT/LOW POINT
- INV INVERT ELEVATION
- ME MATCH EXISTING
- MFFE MINIMUM FINISHED FLOOR ELEVATION
- MFGP MINIMUM FLOOD PROTECTION GRADE
- PAD PAD GRADE
- PC/PT POINT OF CURVATURE/TANGENCY
- PVC POLYVINYL CHLORIDE PIPE
- PVI POINT OF VERTICAL INTERSECTION
- R/W RIGHT-OF-WAY
- TR TOP OF RIM ELEVATION
- Sign/Street Light/Utility Pole

SITE DATA TABLE

ZONING (EXISTING / PROPOSED):	S1/R-1U, R-2, R-4
GROSS AREA:	14.37 AC
PUBLIC RIGHT-OF-WAY (R/W):	±2.41 AC. (16.8%)
TOTAL R-1U LOTS:	28
R-1U AREA:	±4.16 AC. (28.9%)
R-2 AREA:	±1.71 AC. (11.9%)
R-4 AREA:	±3.01 AC. (21.0%)
OUTLOT AREA:	±3.08 AC. (21.4%)
LOCAL ROAD LENGTH:	2,297 LF
TYP. R/W WIDTH:	50' (LOCAL ROAD)
R-1U ZONING SUMMARY (LOT 10-37)	
MIN. LOT AREA:	4,800 SF
MIN. LOT WIDTH:	50'
TYP. LOT DEPTH:	110'
MIN. FRONT YARD SETBACK:	15'
MIN. SIDE YARD SETBACK:	20% TOTAL WIDTH
MIN. REAR YARD SETBACK:	20'
R-2 ZONING SUMMARY (LOT 2-9)	
MIN. LOT AREA (SINGLE-FAMILY):	6,250 SF
MIN. LOT AREA (TWO-FAMILY):	7,500 SF
MIN. LOT WIDTH:	60' (VARIANCE TO 45')
MIN. FRONT YARD SETBACK:	25'
MIN. SIDE YARD SETBACK:	20% TOTAL WIDTH (5' EACH) (VARIANCE TO 0')
MIN. REAR YARD SETBACK:	25'
R-4 ZONING SUMMARY (LOT 1)	
MIN. LOT AREA:	130,680 SF
MIN. FRONT YARD SETBACK:	30'
MIN. SIDE YARD SETBACK:	25% TOTAL WIDTH
MIN. REAR YARD SETBACK:	30'

- GENERAL NOTES:**
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 - SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

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- INDIANA UNDERGROUND -



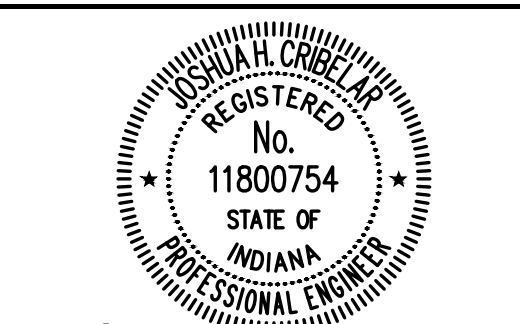
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MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



Joshua H. Cristler
CERTIFIED BY

ISSUANCE INDEX

DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE

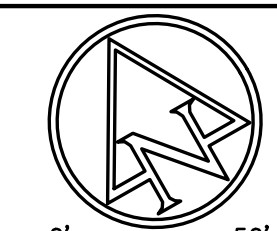
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

DEVELOPMENT PLAN

C200

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EDIT DATE: 12/02/2024
EDIT BY: MLVNBCH
PLOT DATE: 12/02/2024 4:29 PM
PLOT SCALE: 1:1



SCALE: 1"=50'

EXISTING LEGEND

- ⊕ Temporary Bench Mark
- ⊙ Well
- ⊕ Combination Pole
- ⊕ Electric Meter Box
- ⊕ Electric Box
- ⊕ Gas Meter
- ⊕ Gas Marker Sign
- ⊕ Guy Wire
- ⊕ Telephone Handhole
- ⊕ Telephone Marker Sign
- ⊕ Telephone Pole
- ⊕ Telephone Pedestal
- fo Buried Fiber Optic
- e Buried Electric Line
- g Buried Gas Line
- t Buried Telephone Line
- ht Overhead Telephone Line
- w Buried Water Line
- ⊕ Beehive Inlet
- ⊕ Curb Inlet
- ⊕ Fire Hydrant
- ⊕ Clean Out
- ⊕ Tree
- ⊕ Bush
- ⊕ Stump
- ⊕ Spigot
- ⊕ Mailbox
- ⊕ Pine
- ⊕ Post
- ⊕ Power Pole
- ⊕ Sign
- ⊕ Stand Pipe
- ⊕ Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
- WET DETENTION POND NORMAL POOL
- LOT LINE
- WATER MAIN
- ⊕ SS SANITARY MAIN
- SWALE
- ⊕ SD 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- STORM SEWER
- OVERHEAD ELECTRIC
- ⊕ FIRE HYDRANT & WATER VALVE
- ⊕ WATER TEE, CROSS & BEND
- ⊕ SQUARE FEET
- BUILDING SETBACK LINE
- BACK TO BACK
- DRAINAGE EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
- INV INVERT ELEVATION
- PVC POLYVINYL CHLORIDE PIPE
- R/W RIGHT-OF-WAY
- TR TOP OF RIM ELEVATION
- ⊕ SIGN/STREET LIGHT/UTILITY POLE

KEYNOTES

1. "STOP" SIGN (R1-1) ON A SQUARE BREAK-AWAY POST.
2. STREET NAME SIGN ON A SQUARE BREAK-AWAY POST.
3. STREET LIGHT (SEE NOTE BELOW).
4. N/A
5. END OF STREET BARRICADE.
6. RELOCATED STREET LIGHT. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER PRIOR TO CONSTRUCTION.
7. RELOCATED UTILITY POLE. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER PRIOR TO CONSTRUCTION.
8. END OF STREET BARRICADE (TO BE REMOVED UPON COMPLETION OF CONSTRUCTION).

STREET LIGHT NOTE:

ALL LIGHTING FIXTURES AND POLES WITHIN THIS DEVELOPMENT SHALL BE CONSISTENT IN STYLE, COLOR, SIZE, HEIGHT, AND DESIGN AND ARE TO BE COMPATIBLE WITH THE ARCHITECTURE CHARACTER OF THE DEVELOPMENT. SERVICE CONNECTIONS FOR ALL FREE STANDING LIGHTING FIXTURES MUST BE INSTALLED UNDERGROUND. ALL LIGHTING FIXTURES SHALL BE FULL 90-DEGREE CUTOFF FIXTURES.

GENERAL NOTES:

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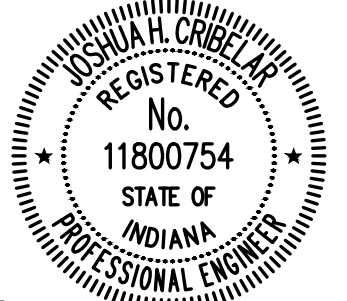
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Joshua H. Cristler
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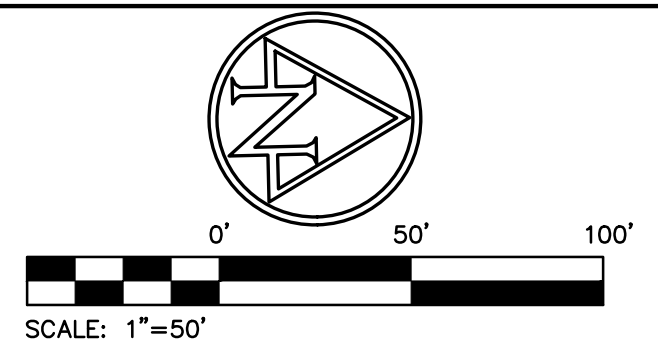
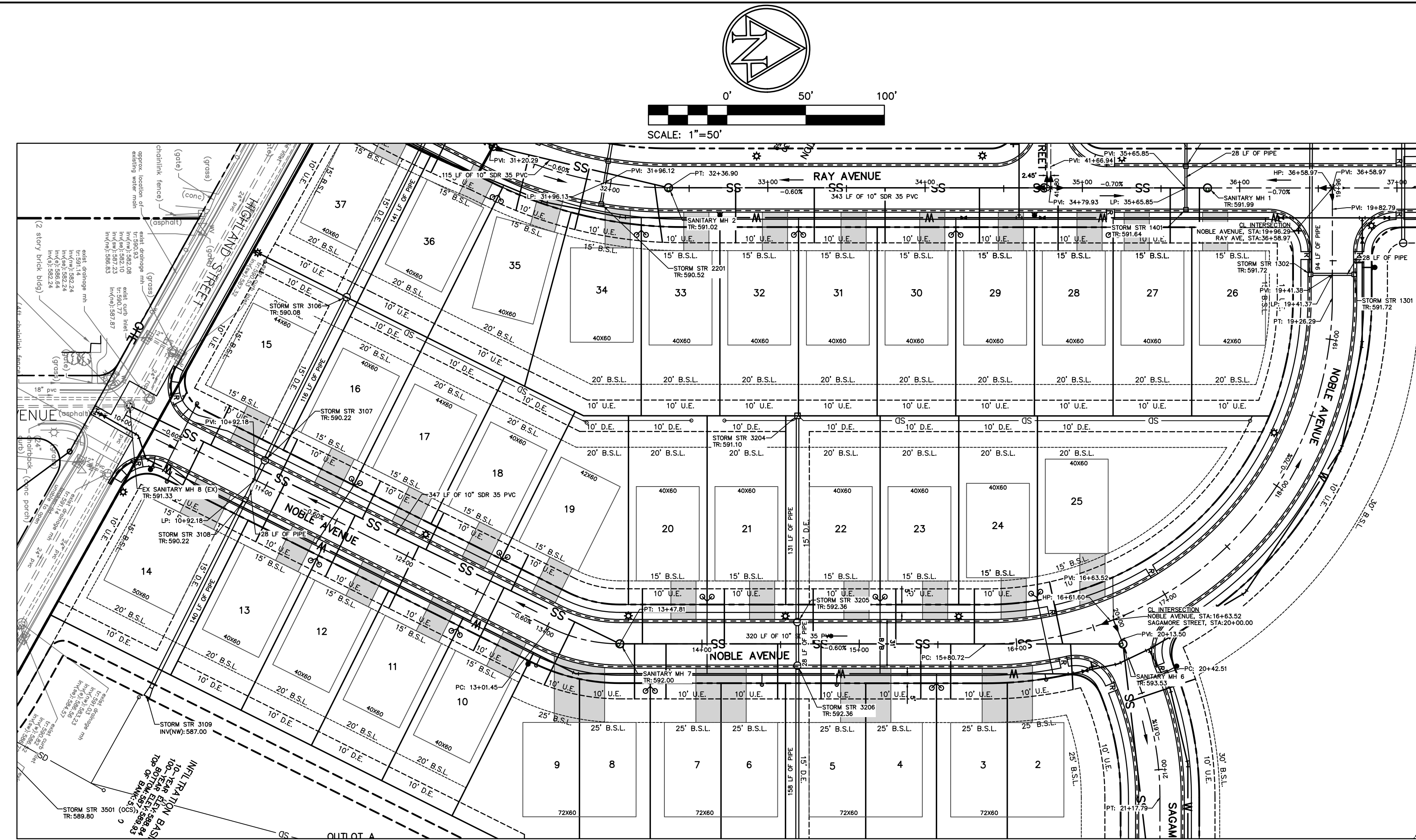
Project Number 2021.03290

TRAFFIC CONTROL & LIGHTING PLAN

C210

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 EDITED BY: M.VNCH
 EDIT DATE: 10/16/2024



EXISTING LEGEND

⊕ Temporary Bench Mark	⊕ Beehive Inlet
⊕ Well	⊕ Curb Inlet
⊕ Combination Pole	⊕ Fire Hydrant
⊕ Electric Meter Box	⊕ Clean Out
⊕ Electric Box	⊕ Tree
⊕ Gas Meter	⊕ Gas Marker Sign
⊕ Guy Wire	⊕ Bush
⊕ Telephone Handhole	⊕ Stump
⊕ Telephone Marker Sign	⊕ Spigot
⊕ Telephone Pole	⊕ Mailbox
⊕ Telephone Pedestal	⊕ Pine
⊕ Buried Fiber Optic	⊕ Post
⊕ Buried Electric Line	⊕ Power Pole
⊕ Buried Gas Line	⊕ Sign
⊕ Buried Telephone Line	⊕ Stand Pipe
⊕ Overhead Electric Line	⊕ Existing Pond
⊕ Buried Telephone Line	⊕ Existing Pond
⊕ Overhead Telephone Line	⊕ Existing Pond
⊕ Buried Water Line	⊕ Existing Pond

PROPOSED LEGEND

⊕ RIGHT-OF-WAY (R/W) LINE
⊕ BUILDING SETBACK LINE
⊕ EASEMENT
⊕ WET DETENTION POND NORMAL POOL
⊕ LOT LINE
⊕ WATER MAIN
⊕ SS SANITARY MAIN
⊕ SWALE
⊕ 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
⊕ STORM SEWER
⊕ OVERHEAD ELECTRIC
⊕ FIRE HYDRANT & WATER VALVE
⊕ WATER TEE, CROSS & BEND
⊕ FLOW ARROW
⊕ SQUARE FEET
⊕ B.S.L. BUILDING SETBACK LINE
⊕ B/B BACK TO BACK
⊕ D.E. DRAINAGE EASEMENT
⊕ D.&U.E. DRAINAGE & UTILITY EASEMENT
⊕ HP/LP HIGH POINT/LOW POINT
⊕ INV INVERT ELEVATION
⊕ ME MATCH EXISTING
⊕ PC/PT POINT OF CURVATURE/TANGENCY
⊕ PVC POLYVINYL CHLORIDE PIPE
⊕ PVI POINT OF VERTICAL INTERSECTION
⊕ R/W RIGHT-OF-WAY
⊕ TR TOP OF RIM ELEVATION
⊕ SIGN/STREET LIGHT/UTILITY POLE

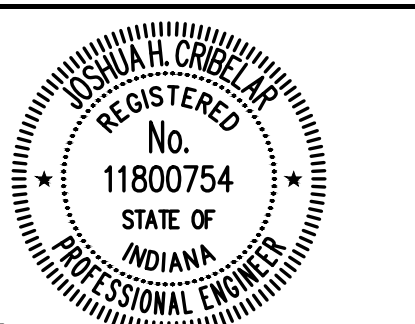


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MEMORIAL PARK REDEVELOPMENT

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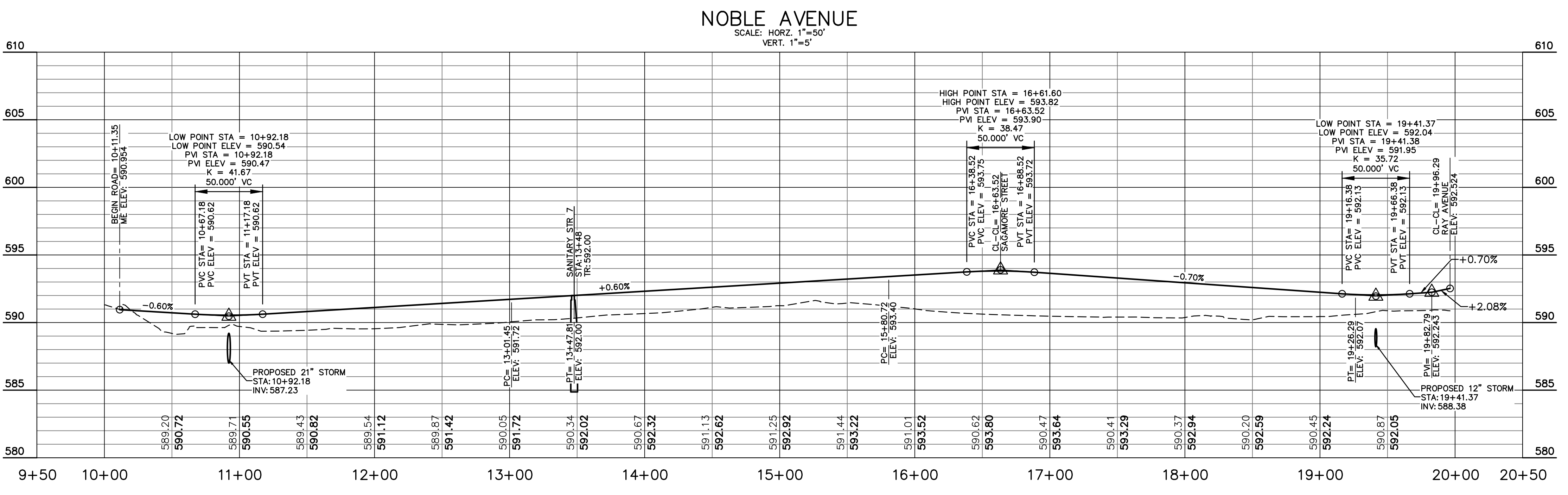
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REVISION SCHEDULE		
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1	ADDENDUM #2	12/05/24

Project Number 2021.03290

ROAD PLAN & PROFILE

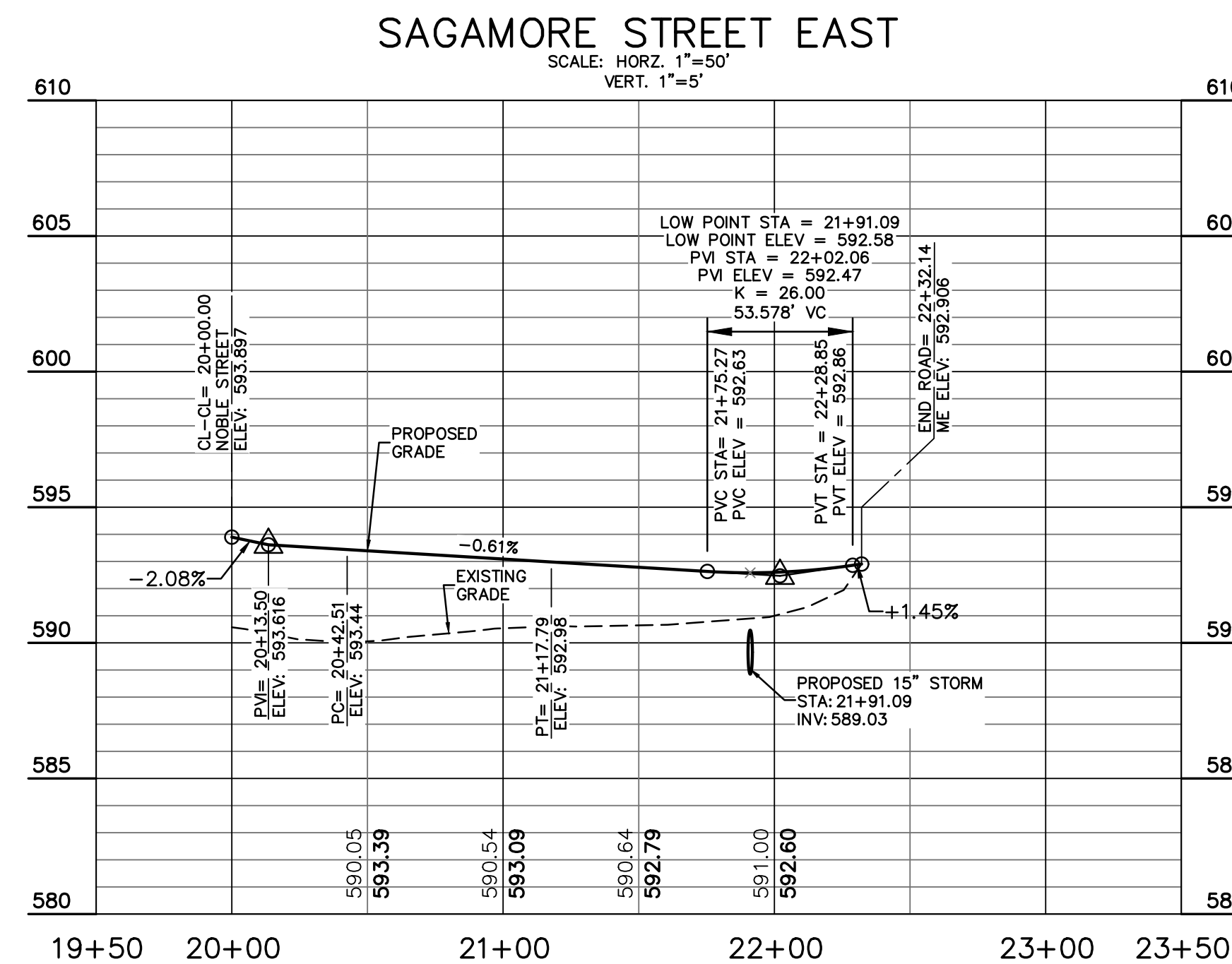
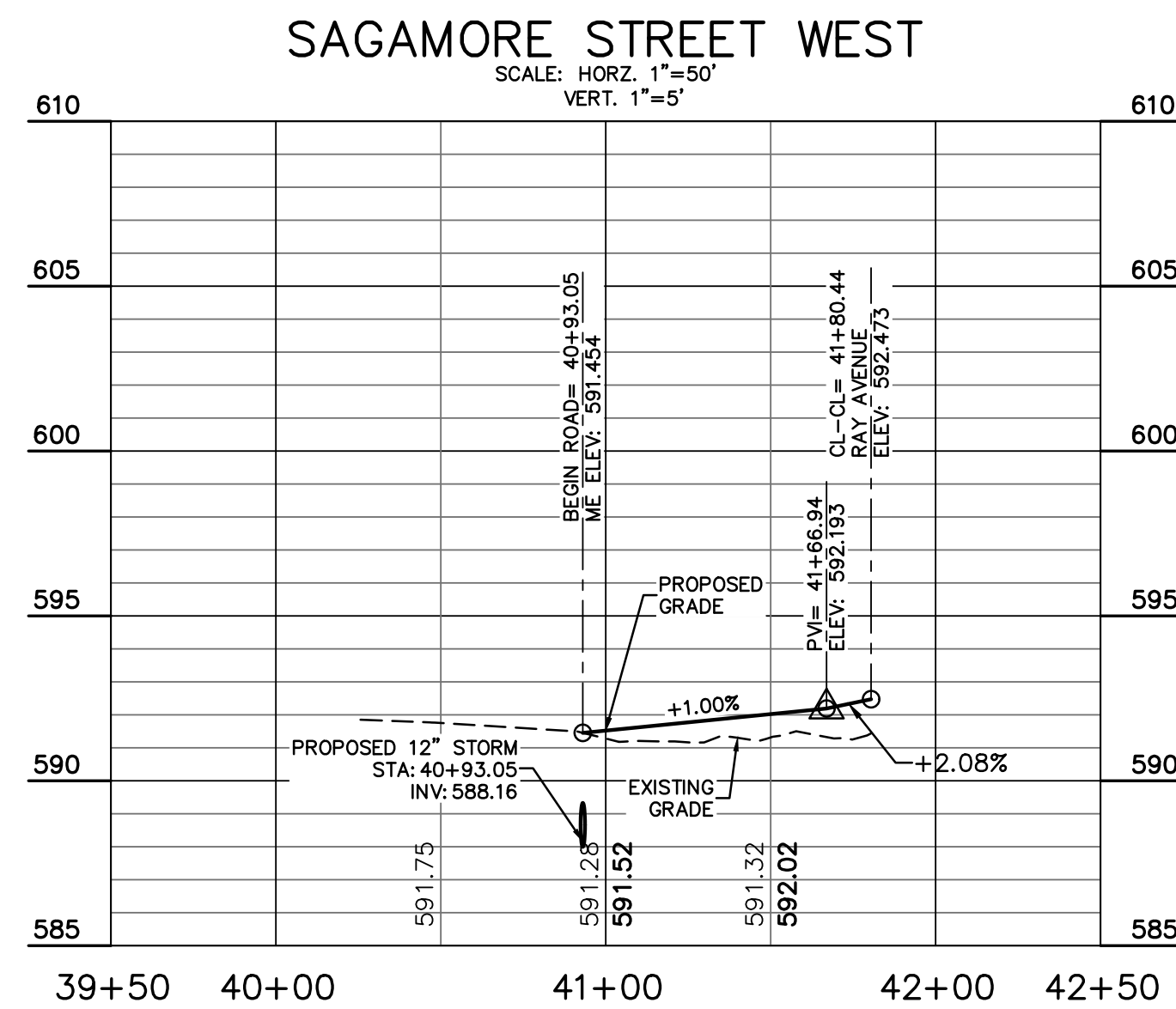
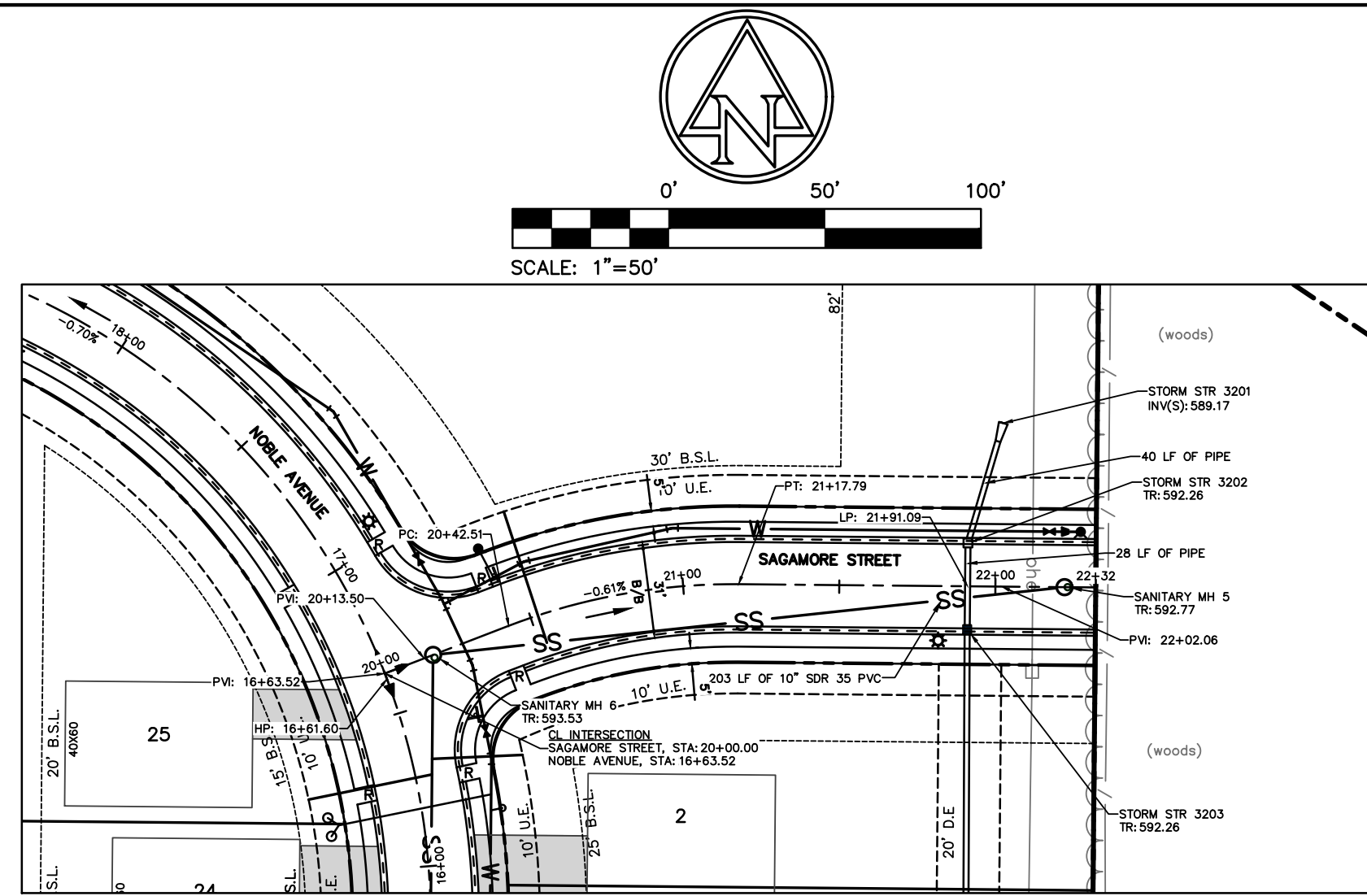
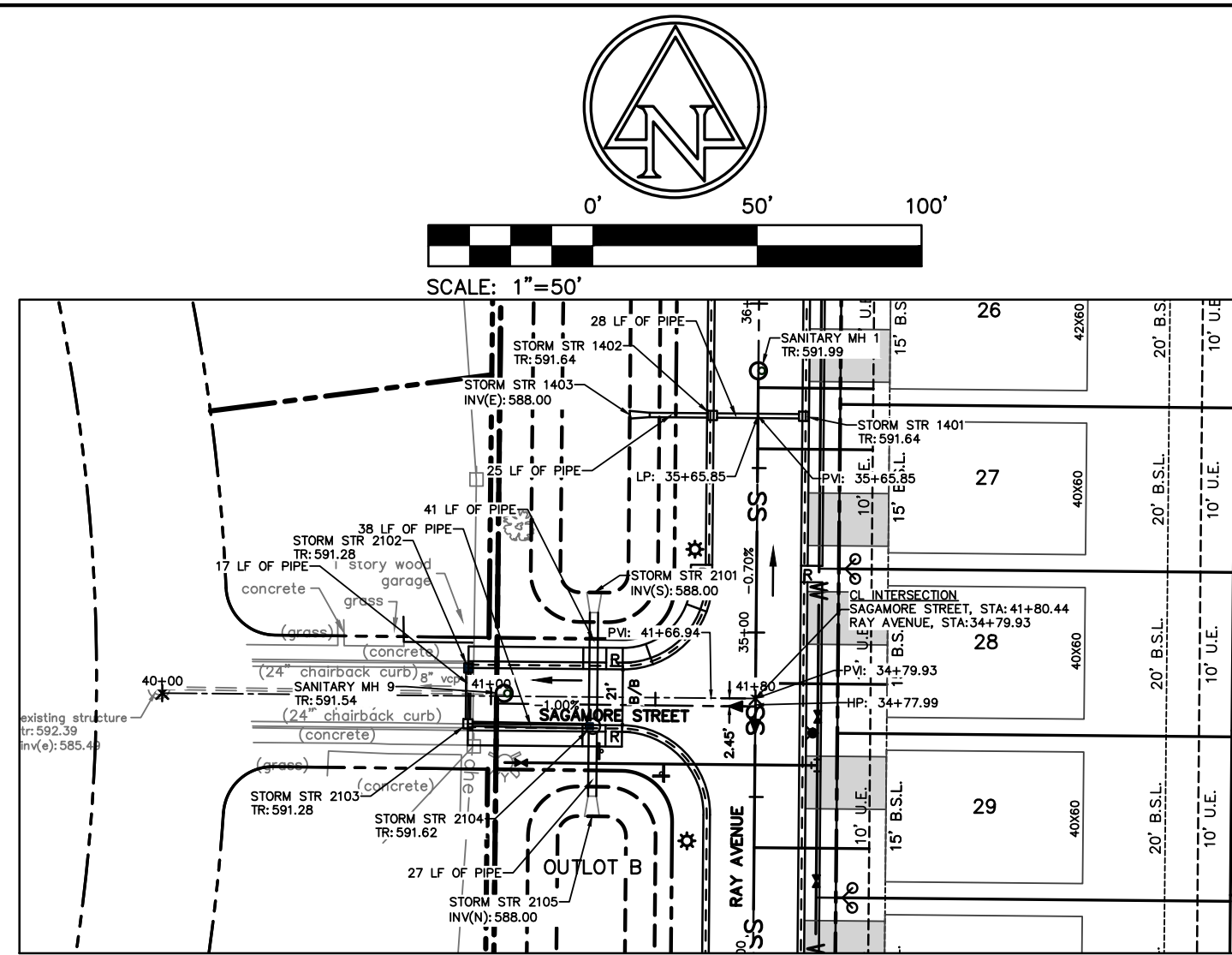
C300



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 - INDIANA UNDERGROUND -

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 EDITED BY: MLVNCB
 EDIT DATE: 01/16/2024



EXISTING LEGEND

- Temporary Bench Mark
- Well
- Combination Pole
- Electric Meter Box
- Electric Box
- Gas Meter
- Gas Marker Sign
- Guy Wire
- Telephone Handhole
- Telephone Marker Sign
- Telephone Pole
- Telephone Pedestal
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- Overhead Electric Line
- Buried Gas Line
- Buried Telephone Line
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- Curb Inlet
- Fire Hydrant
- Clean Out
- Tree
- Bush
- Stump
- Spigot
- Mailbox
- Pine
- Post
- Power Pole
- Sign
- Stand Pipe
- Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
- WET DETENTION POND
- NORMAL POND
- LOT LINE
- WATER MAIN
- W
- SS
- Sanitary Main
- SWALE
- SD
- 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- Storm Sewer
- OHE
- Overhead Electric
- Fire Hydrant & Water Valve
- Water Tee, Cross & Bend
- Flow Arrow
- Square Feet
- B.S.L.
- Building Setback Line
- B/B
- Back to Back
- D.E.
- Drainage Easement
- D.&U.E.
- Drainage & Utility Easement
- HP/LP
- High Point/Low Point
- INV
- Invert Elevation
- ME
- Match Existing
- PC/PT
- Point of Curvature/Tangency
- PVC
- Polyvinyl Chloride Pipe
- PVI
- Point of Vertical Intersection
- R/W
- Right-of-Way
- TR
- Top of Rim Elevation
- Sign/Street Light/Utility Pole

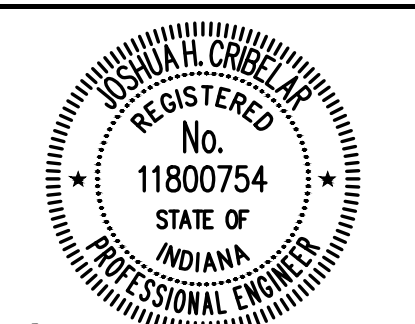


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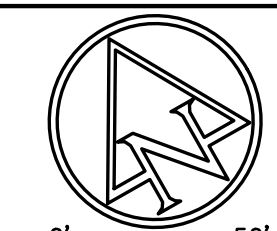
Project Number 2021.03290

ROAD PLAN & PROFILE

C302

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 - INDIANA UNDERGROUND -



SCALE: 1"=50'

EXISTING LEGEND

- ⊕ Temporary Bench Mark
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- ⊕ Electric Meter Box
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- ⊕ Sign
- ⊕ Stand Pipe
- ⊕ Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
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- LOT LINE
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- ⊕ SS ⊕ SANITARY MAIN
- SWALE
- ⊕ SD ⊕ 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- ⊕ STORM SEWER
- OHE ⊕ OVERHEAD ELECTRIC
- ⊕ FIRE HYDRANT & WATER VALVE
- ⊕ WATER TEE, CROSS & BEND
- PROPOSED CONTOUR
- 000.00 SPOT ELEVATION
- 000.00 PAVEMENT ELEVATION
- FLOW ARROW
- SF SQUARE FEET
- B.S.L. BUILDING SETBACK LINE
- D.E. DRAINAGE EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
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- PAD PAD GRADE
- PVC POLYVINYL CHLORIDE PIPE
- R/W RIGHT-OF-WAY
- TR TOP OF RIM ELEVATION
- ⊕ ⊕ SIGN/STREET LIGHT/UTILITY POLE
- ← OVERFLOW PATH



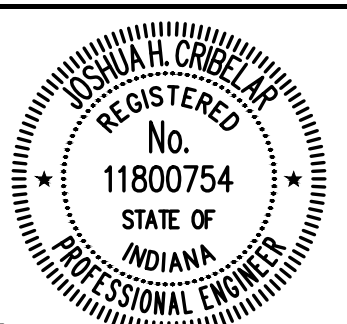
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CERTIFIED BY

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EMERGENCY FLOOD ROUTING PLAN

C320

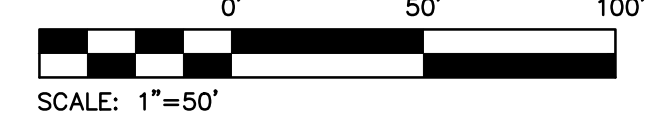
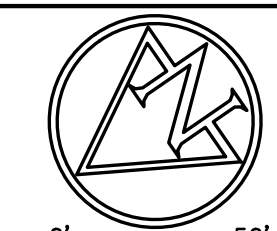
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INDIANA UNDERGROUND

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PLOT SCALE: 1:1



EXISTING LEGEND

- ⊕ Temporary Bench Mark
- ⊙ Well
- ⊕ Combination Pole
- ⊕ Electric Meter Box
- ⊕ Electric Box
- ⊕ Gas Meter
- ⊕ Gas Marker Sign
- ⊕ Guy Wire
- ⊕ Telephone Handhole
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- ⊕ Buried Water Line
- ⊕ Beehive Inlet
- ⊕ Curb Inlet
- ⊕ Fire Hydrant
- ⊕ Clean Out
- ⊕ Tree
- ⊕ Bush
- ⊕ Stump
- ⊕ Spigot
- ⊕ Mailbox
- ⊕ Pine
- ⊕ Post
- ⊕ Power Pole
- ⊕ Sign
- ⊕ Stand Pipe
- ⊕ Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
- WET DETENTION POND NORMAL POOL
- LOT LINE
- WATER MAIN
- ⊕ SS ⊕ SANITARY MAIN
- ⊕ SWALE
- ⊕ SD ⊕ 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- ⊕ STORM SEWER
- ⊕ OHE ⊕ OVERHEAD ELECTRIC
- ⊕ FIRE HYDRANT & WATER VALVE
- ⊕ WATER TEE, CROSS & BEND
- B.S.L. BUILDING SETBACK LINE
- D.E. DRAINAGE EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
- INV. INVERT ELEVATION
- PC/PT POINT OF CURVATURE/TANGENCY
- PVC POLYVINYL CHLORIDE PIPE
- PVI POINT OF VERTICAL INTERSECTION
- R/W RIGHT-OF-WAY
- TR TOP OF RIM ELEVATION
- ⊕ SIGN/STREET LIGHT/UTILITY POLE

STORM SEWER NOTES:

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- MANNINGS COEFFICIENT $n = 0.012$
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GRANULAR BACKFILL REQUIRED

GENERAL NOTES:

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INDIANA UNDERGROUND



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j.cristler@structurepoint.com

MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



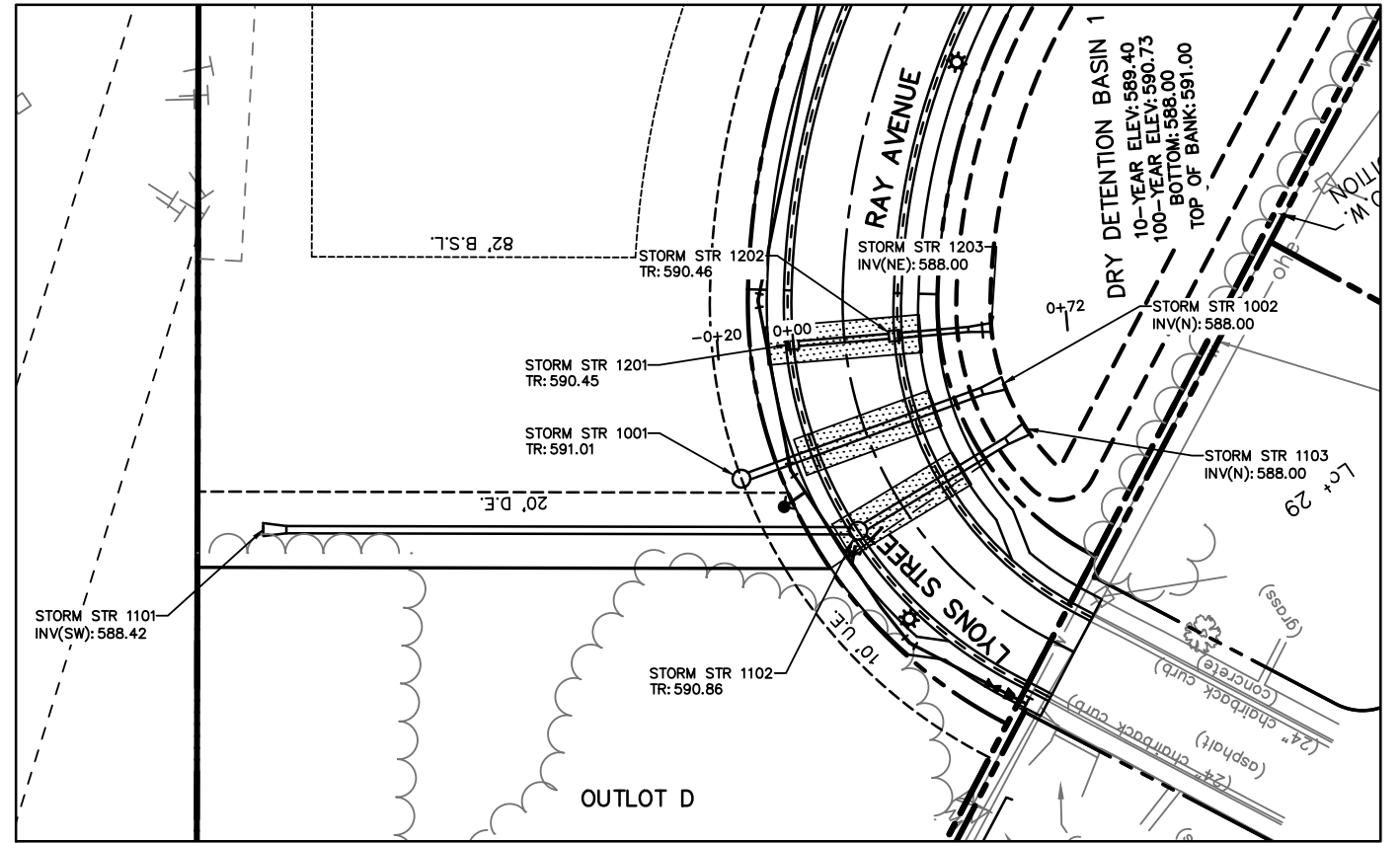
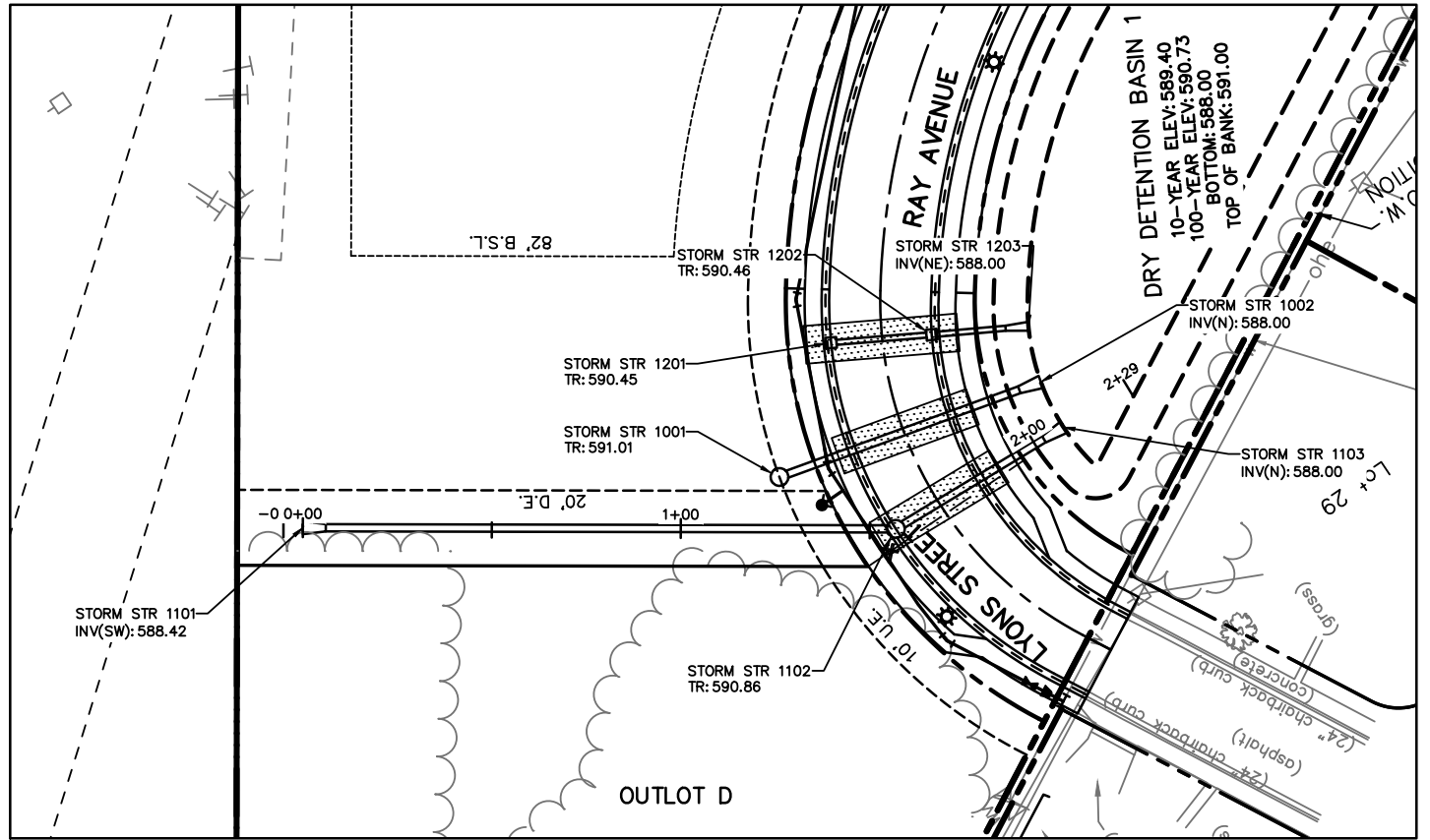
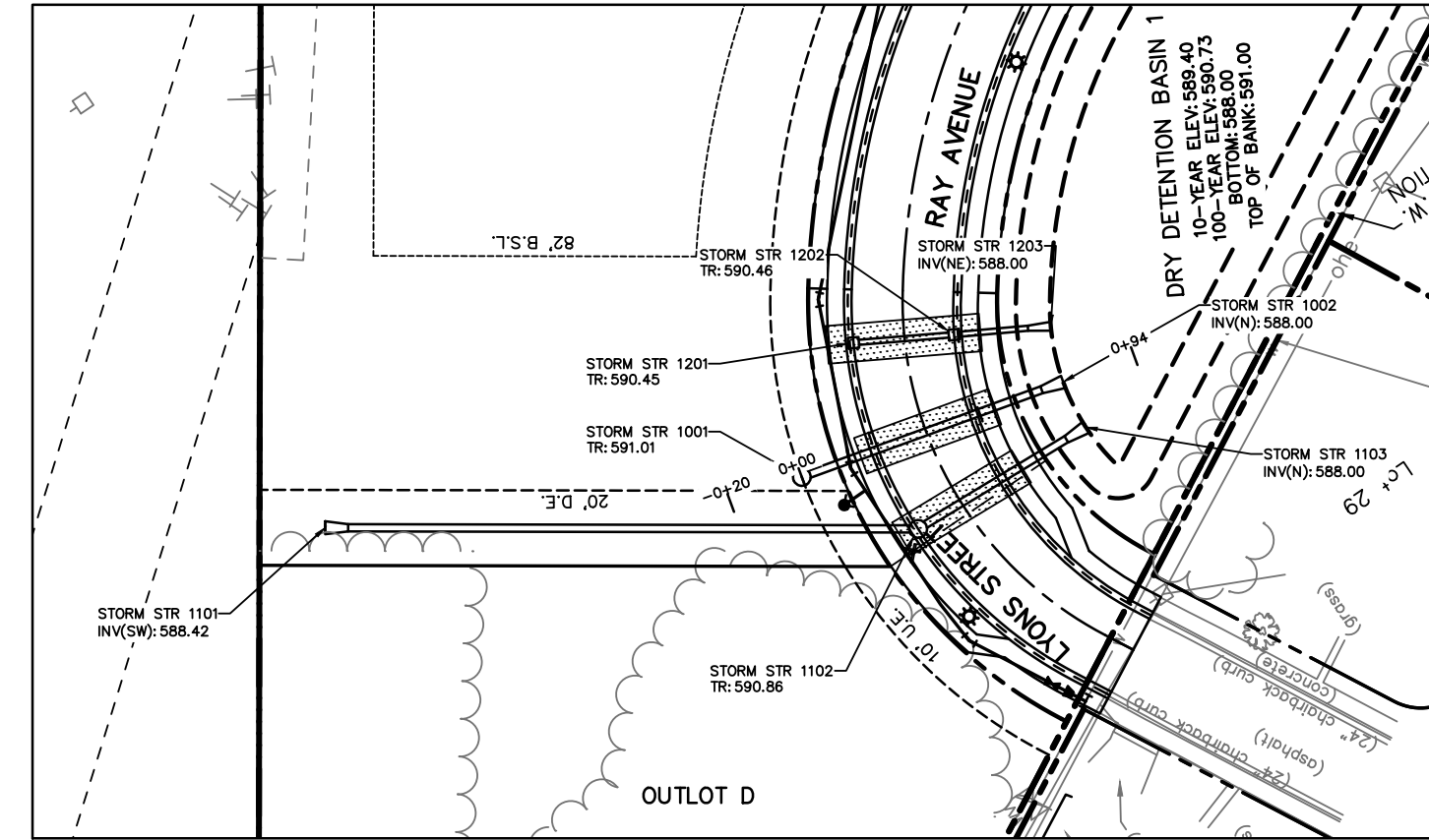
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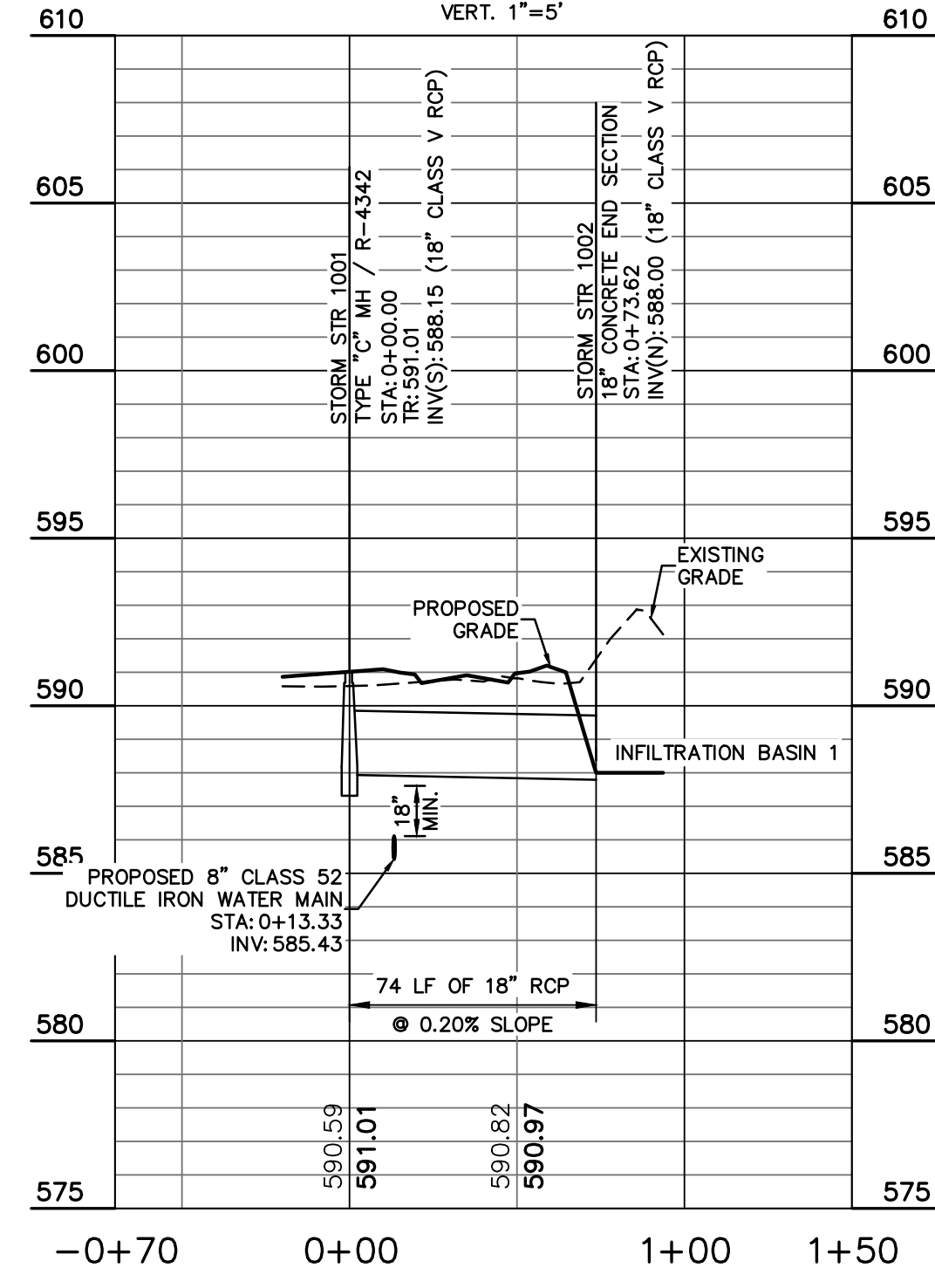
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STORM SEWER PLAN & PROFILE

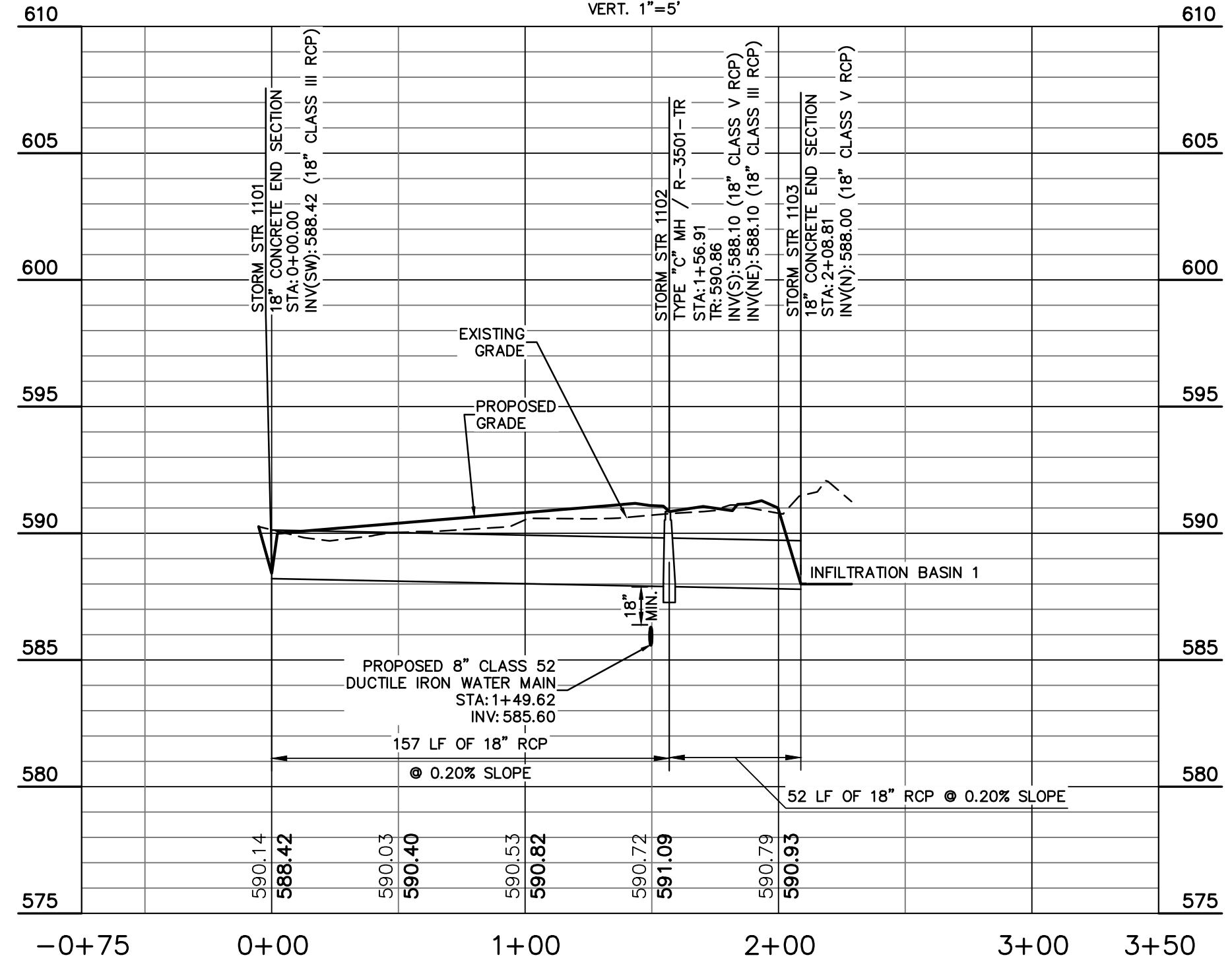
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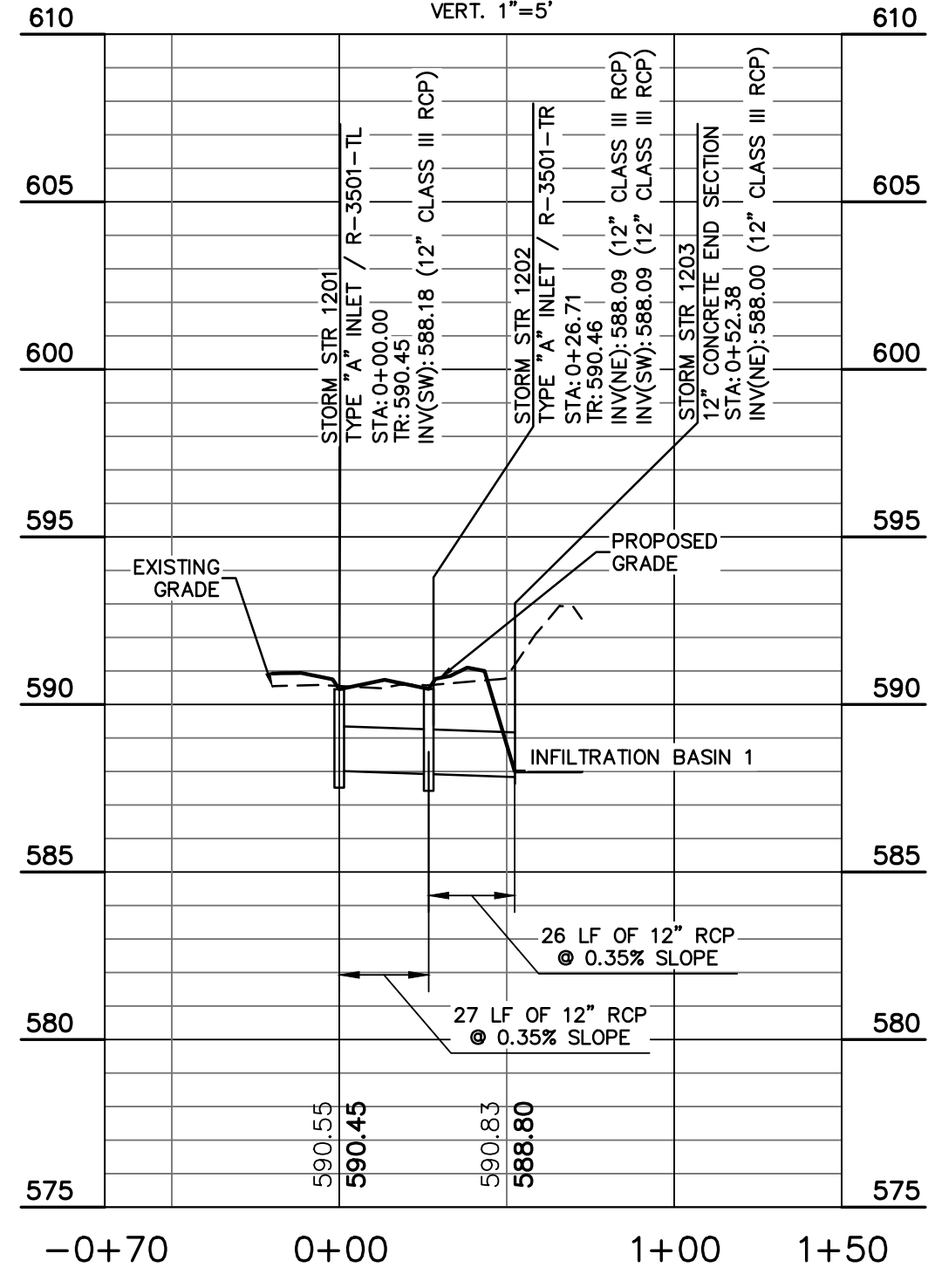
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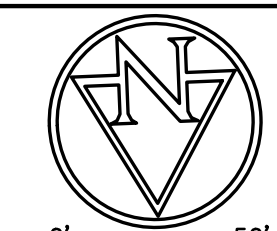
STORM SEWER PROFILE 1



STORM SEWER PROFILE 2



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 EDITED BY: M.V.NCH



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SCALE: 1"=50'



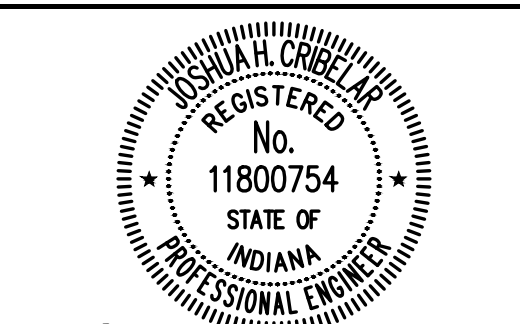
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Joshua H. Cristler
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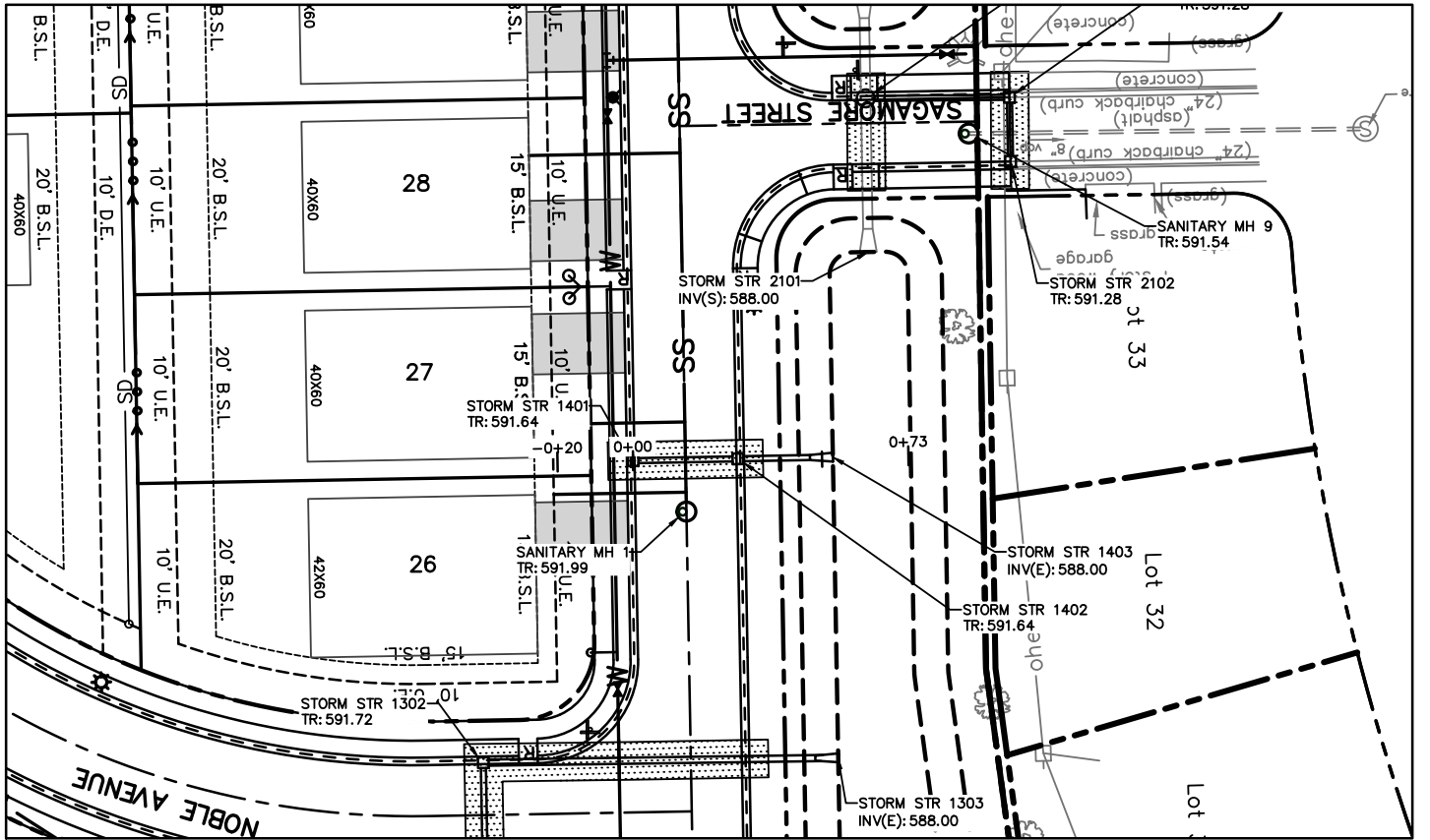
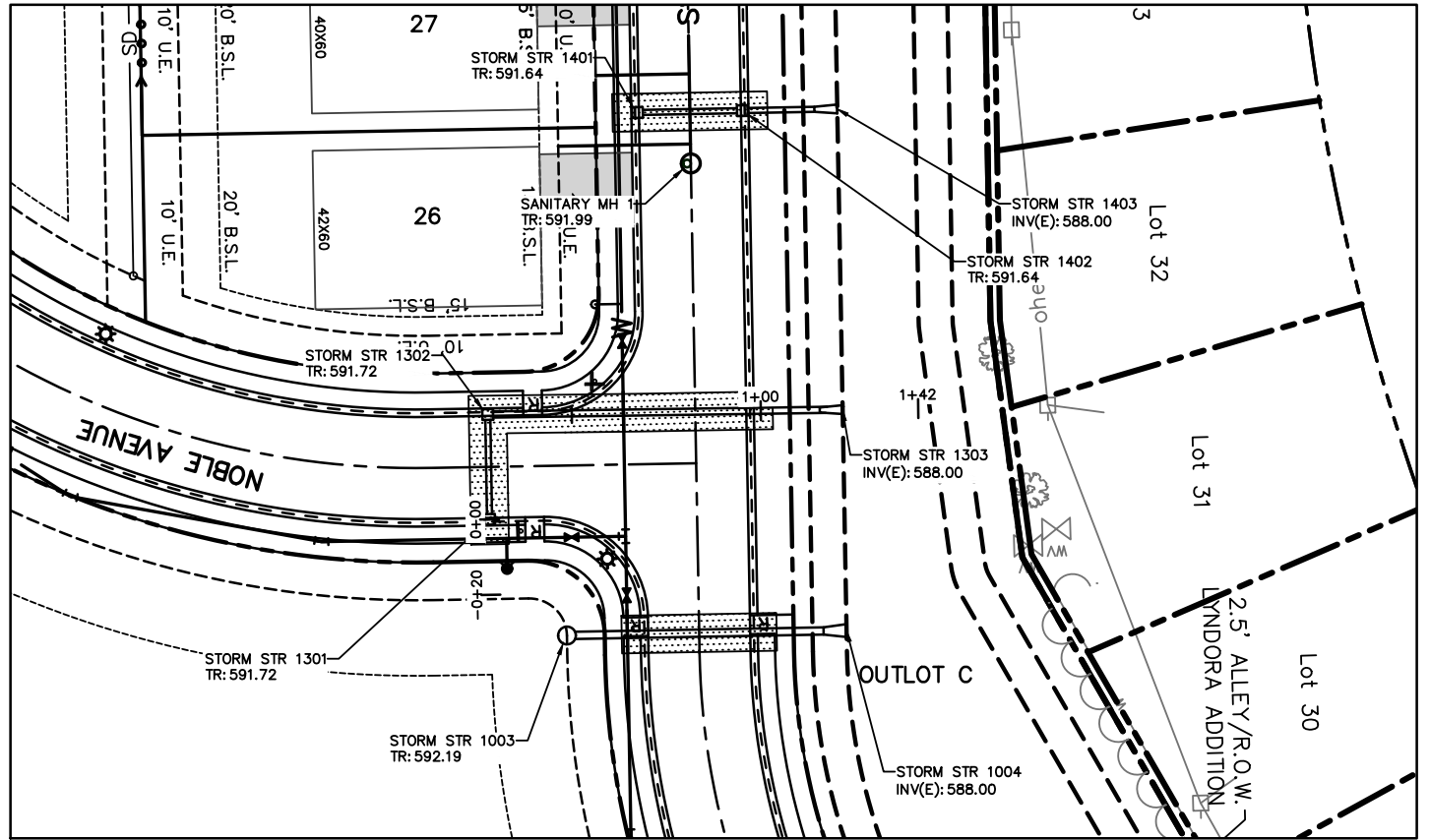
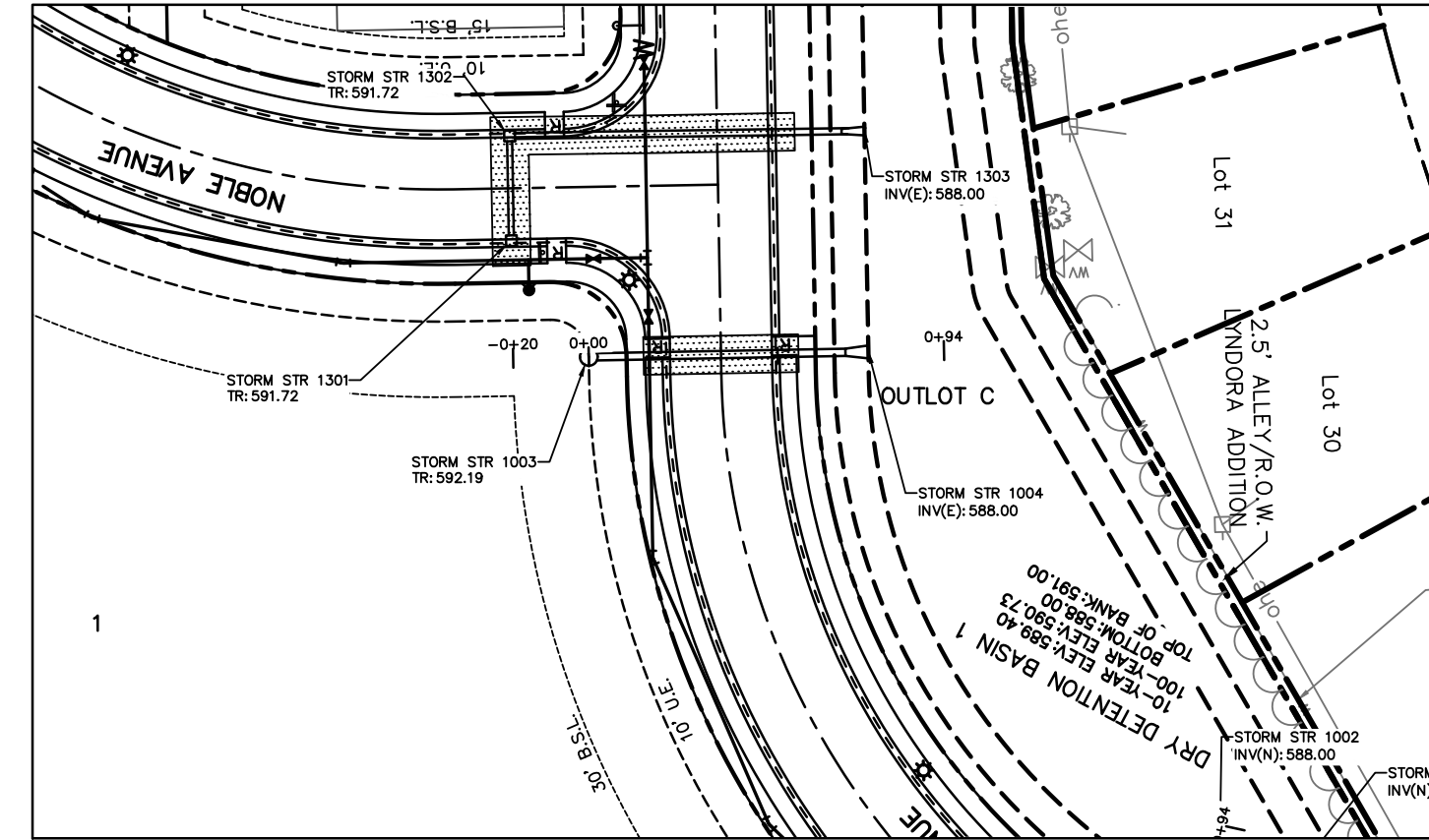
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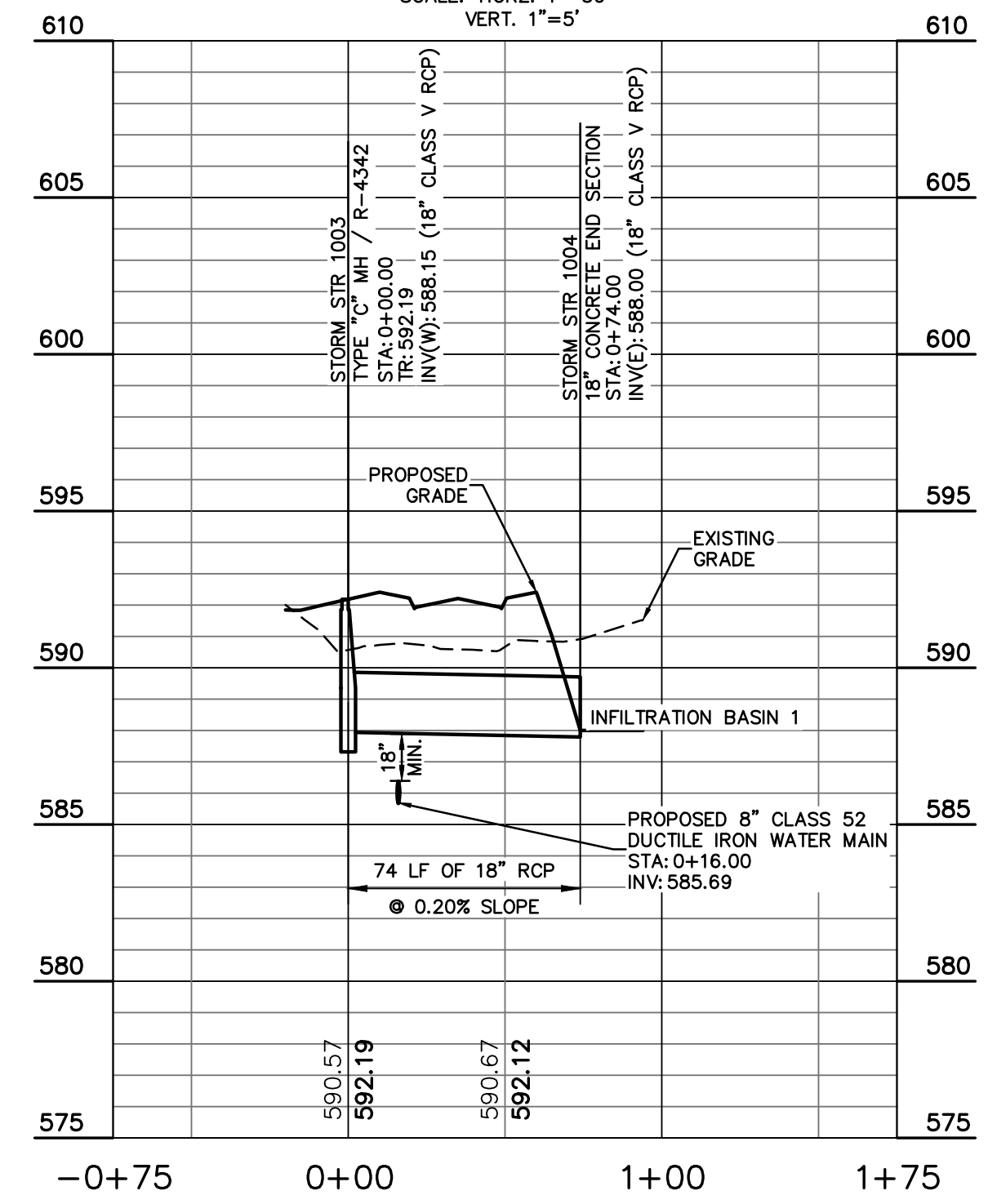
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STORM SEWER PLAN & PROFILE

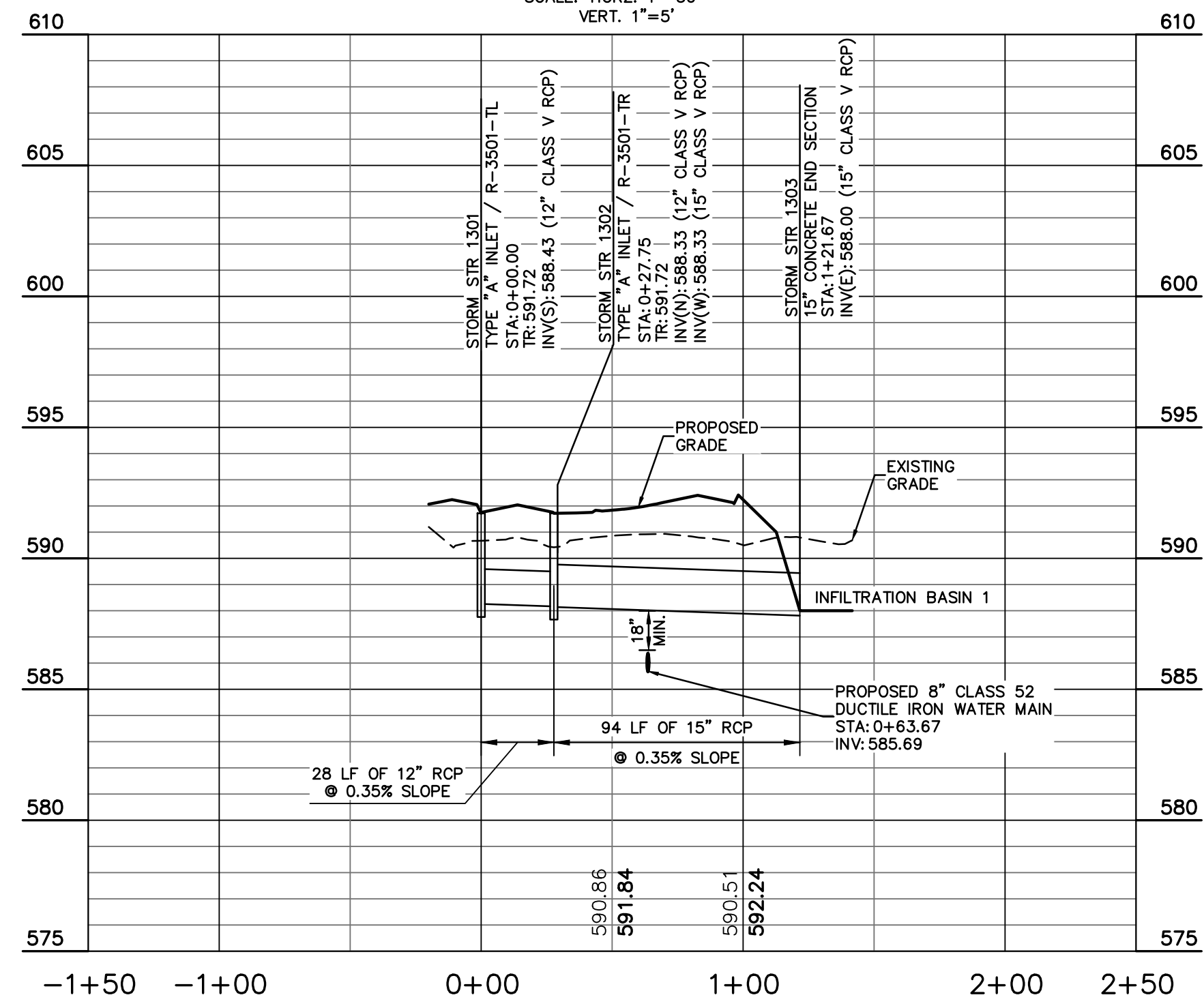
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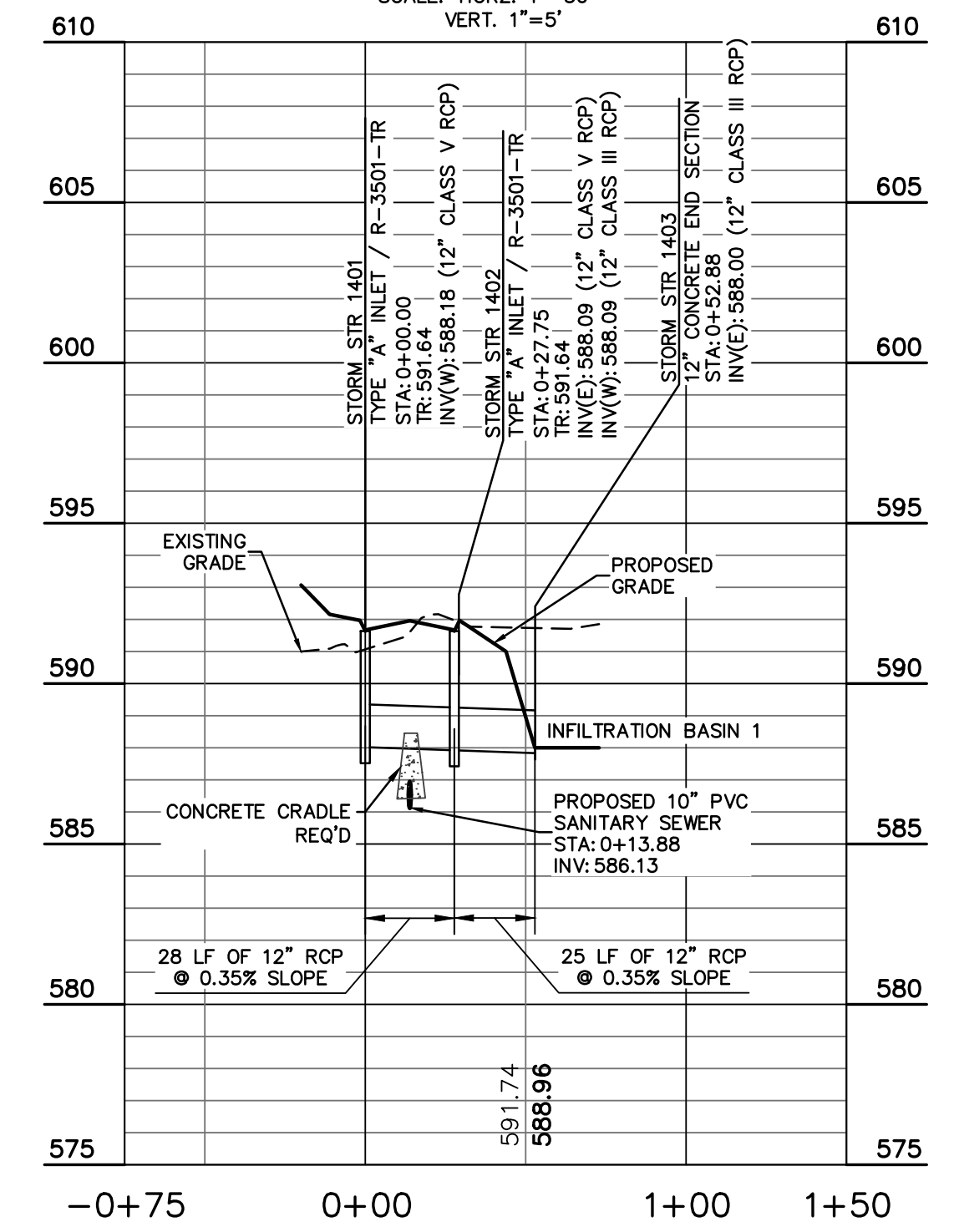
STORM SEWER PROFILE 3



STORM SEWER PROFILE 4



STORM SEWER PROFILE 5



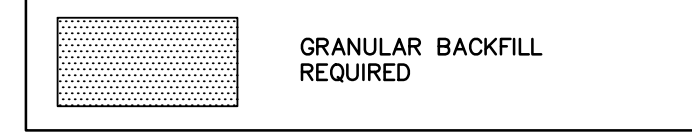
EXISTING LEGEND

- Temporary Bench Mark
- Well
- Combination Pole
- Electric Meter Box
- Electric Box
- Gas Meter
- Gas Marker Sign
- Guy Wire
- Telephone Handhole
- Telephone Marker Sign
- Telephone Pole
- Telephone Pedestal
- Buried Fiber Optic
- Buried Electric Line
- Overhead Electric Line
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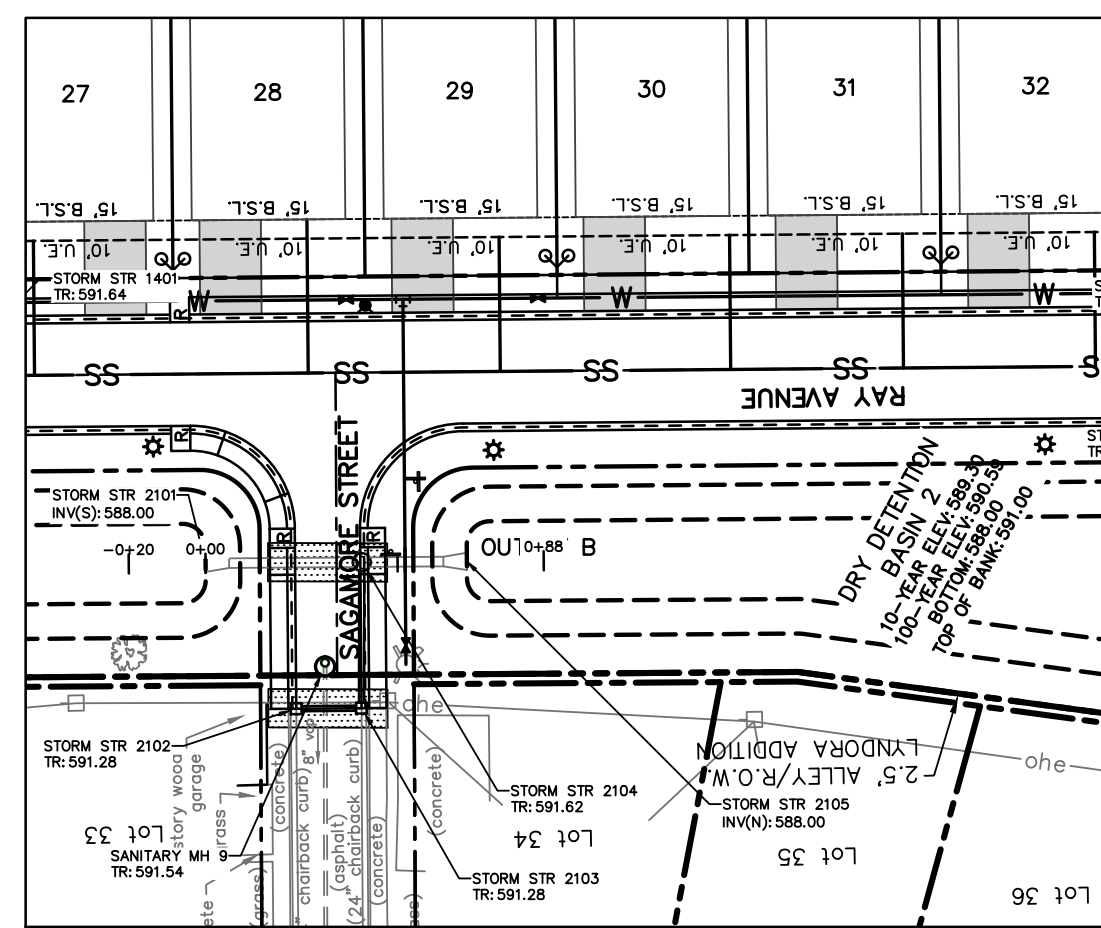
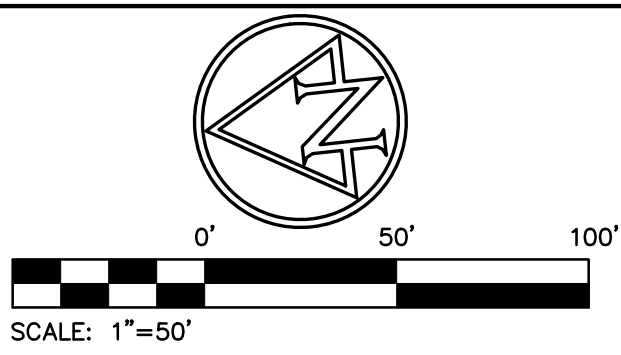
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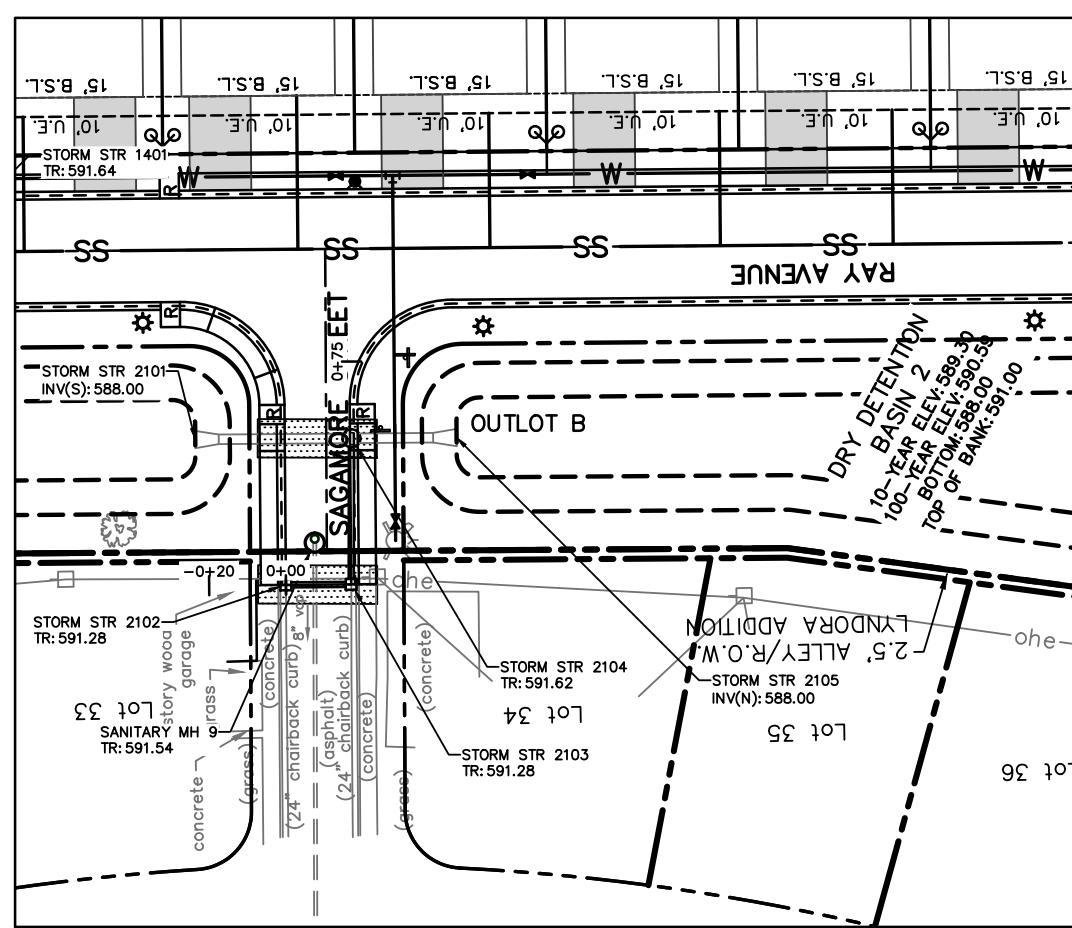
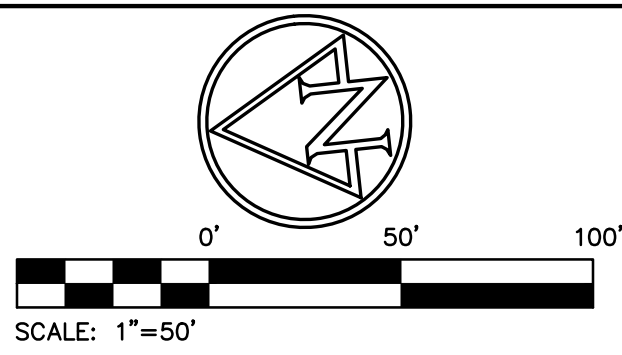
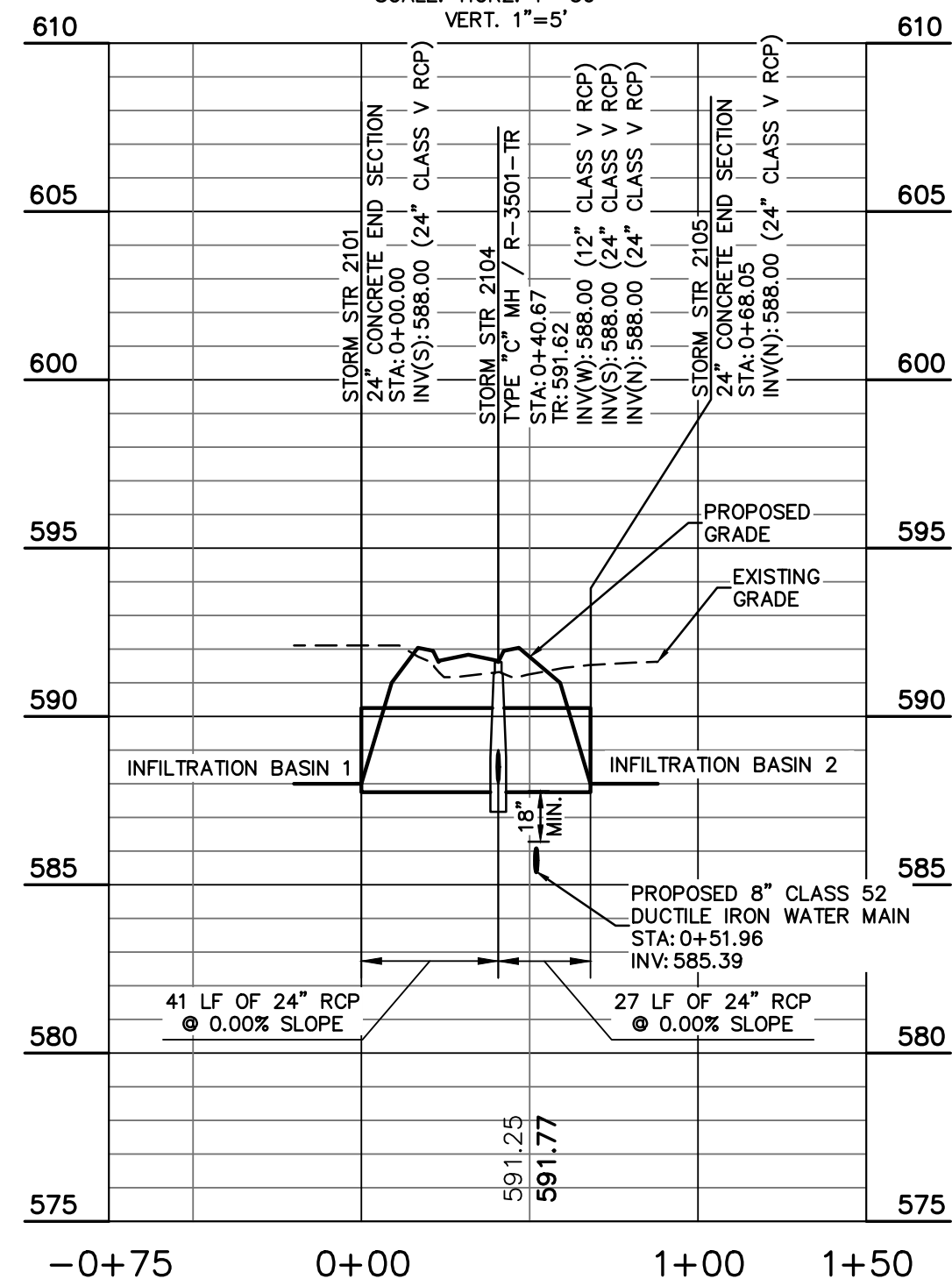
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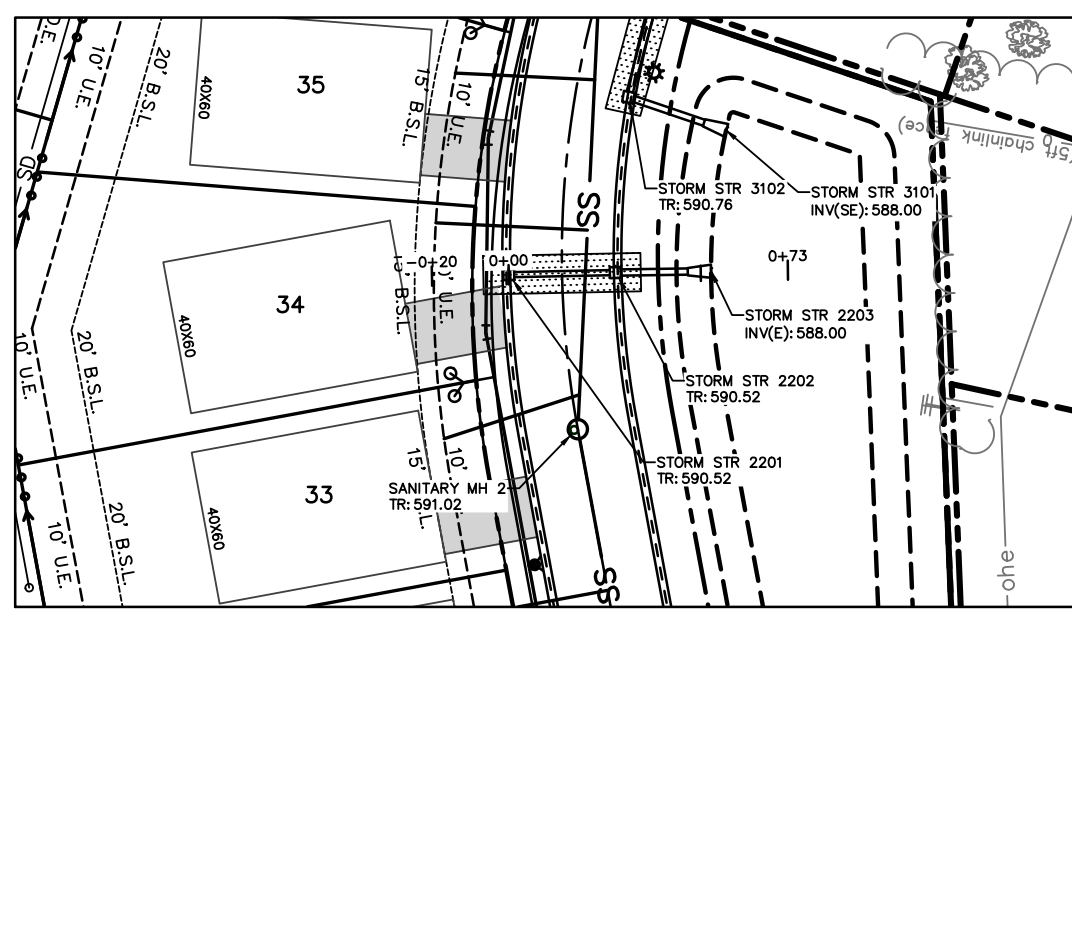
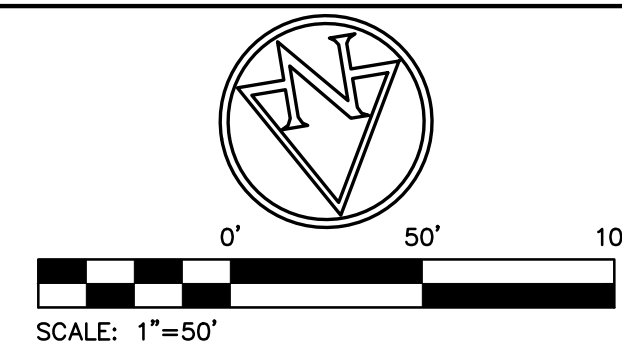
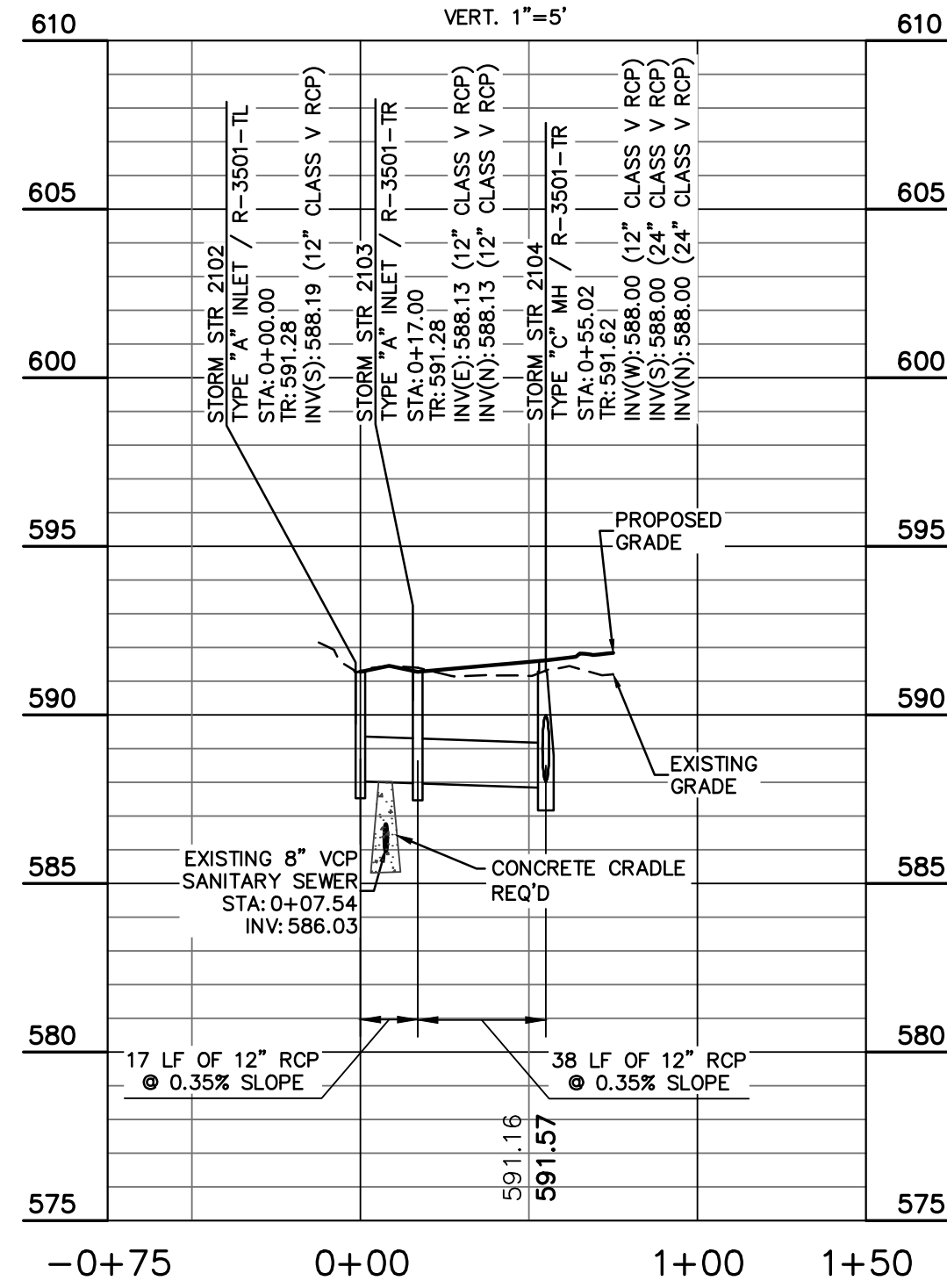
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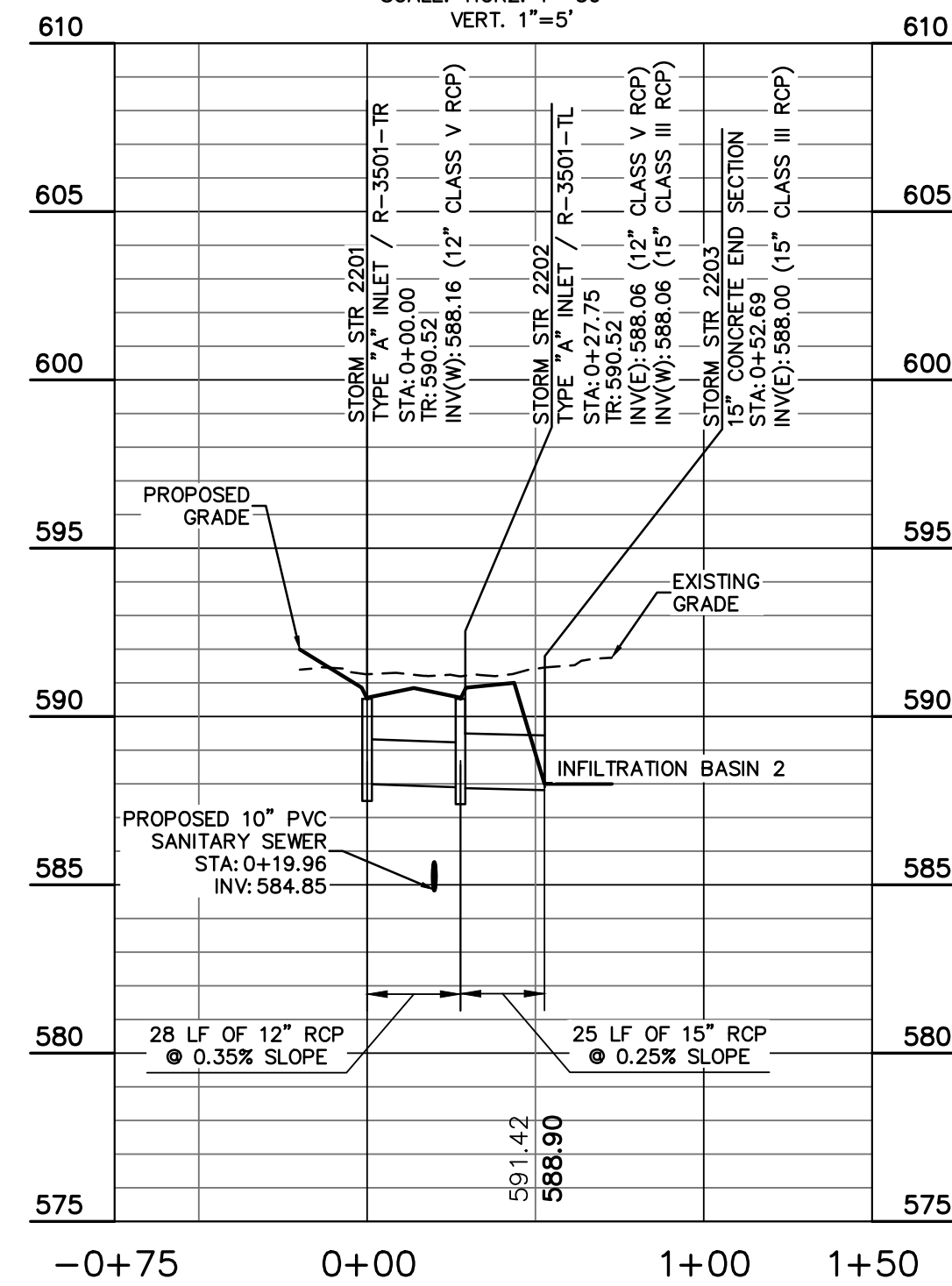
STORM SEWER PROFILE 6
SCALE: HORZ. 1"=50'
VERT. 1"=5'



STORM SEWER PROFILE 7
SCALE: HORZ. 1"=50'
VERT. 1"=5'



STORM SEWER PROFILE 8
SCALE: HORZ. 1"=50'
VERT. 1"=5'



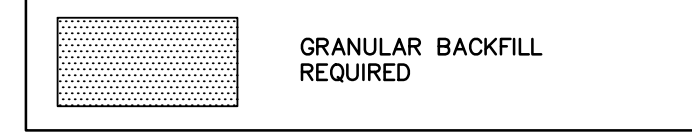
EXISTING LEGEND

- Temporary Bench Mark
- Well
- Combination Pole
- Electric Meter Box
- Electric Box
- Gas Meter
- Gas Marker Sign
- Guy Wire
- Telephone Handhole
- Telephone Marker Sign
- Telephone Pole
- Telephone Pedestal
- Buried Fiber Optic
- Buried Electric Line
- Buried Gas Line
- Buried Telephone Line
- Overhead Electric Line
- Buried Telephone Line
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- Beehive Inlet
- Curb Inlet
- Fire Hydrant
- Clean Out
- Tree
- Bush
- Stump
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- Mailbox
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- Post
- Power Pole
- Stand Pipe
- Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
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- LOT LINE
- WATER MAIN
- SS - SANITARY MAIN
- SWALE
- 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
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- PVI POINT OF VERTICAL INTERSECTION
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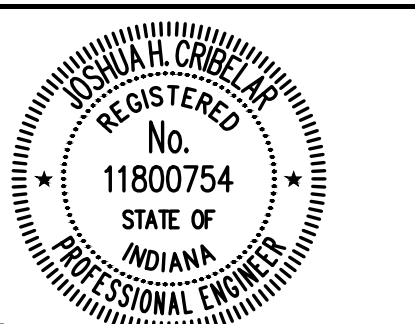


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MEMORIAL PARK REDEVELOPMENT

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Joshua H. Cibula
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Project Number 2021.03290

STORM SEWER PLAN & PROFILE

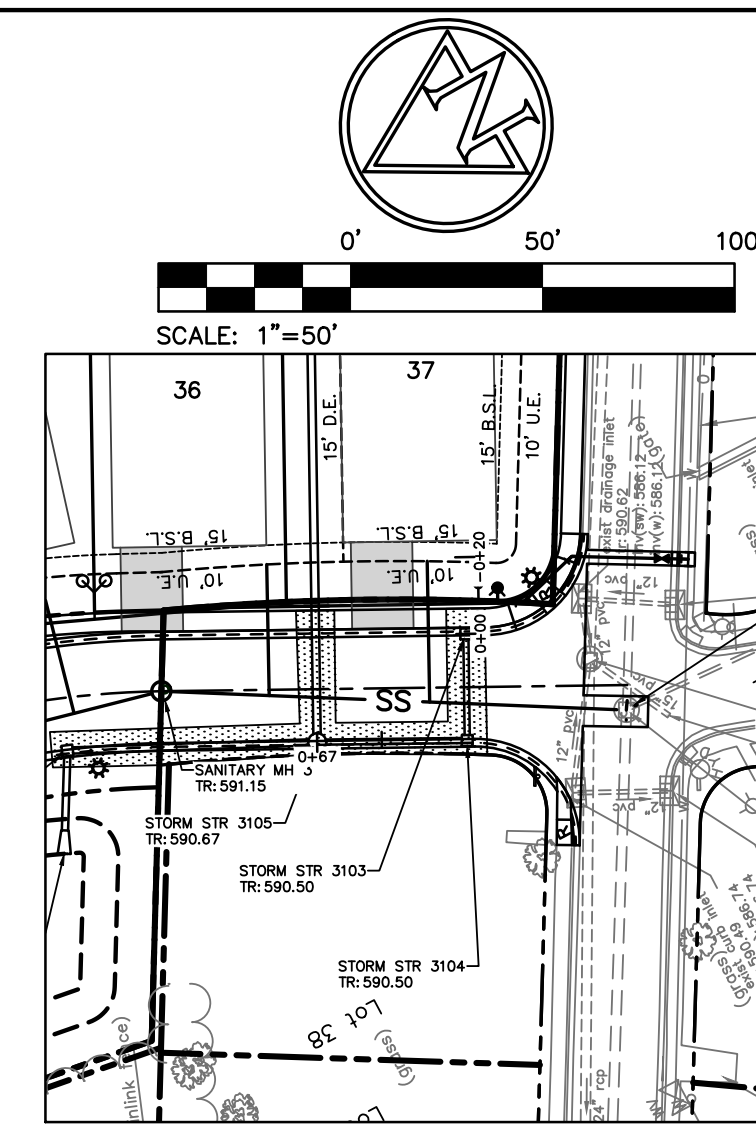
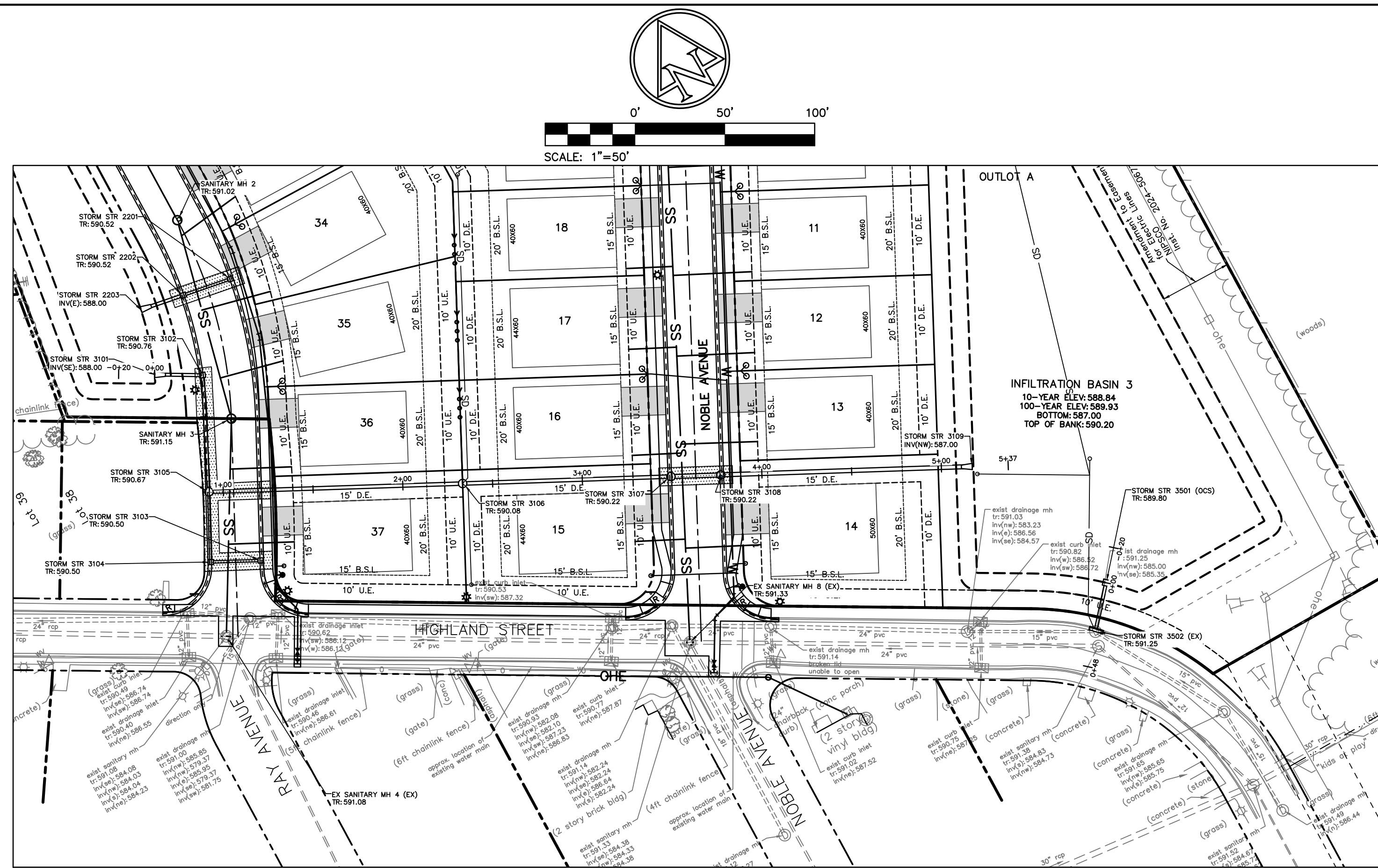
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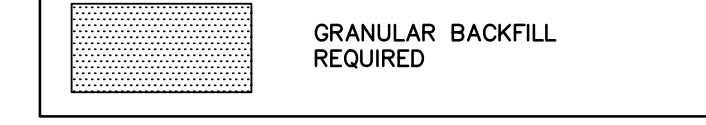
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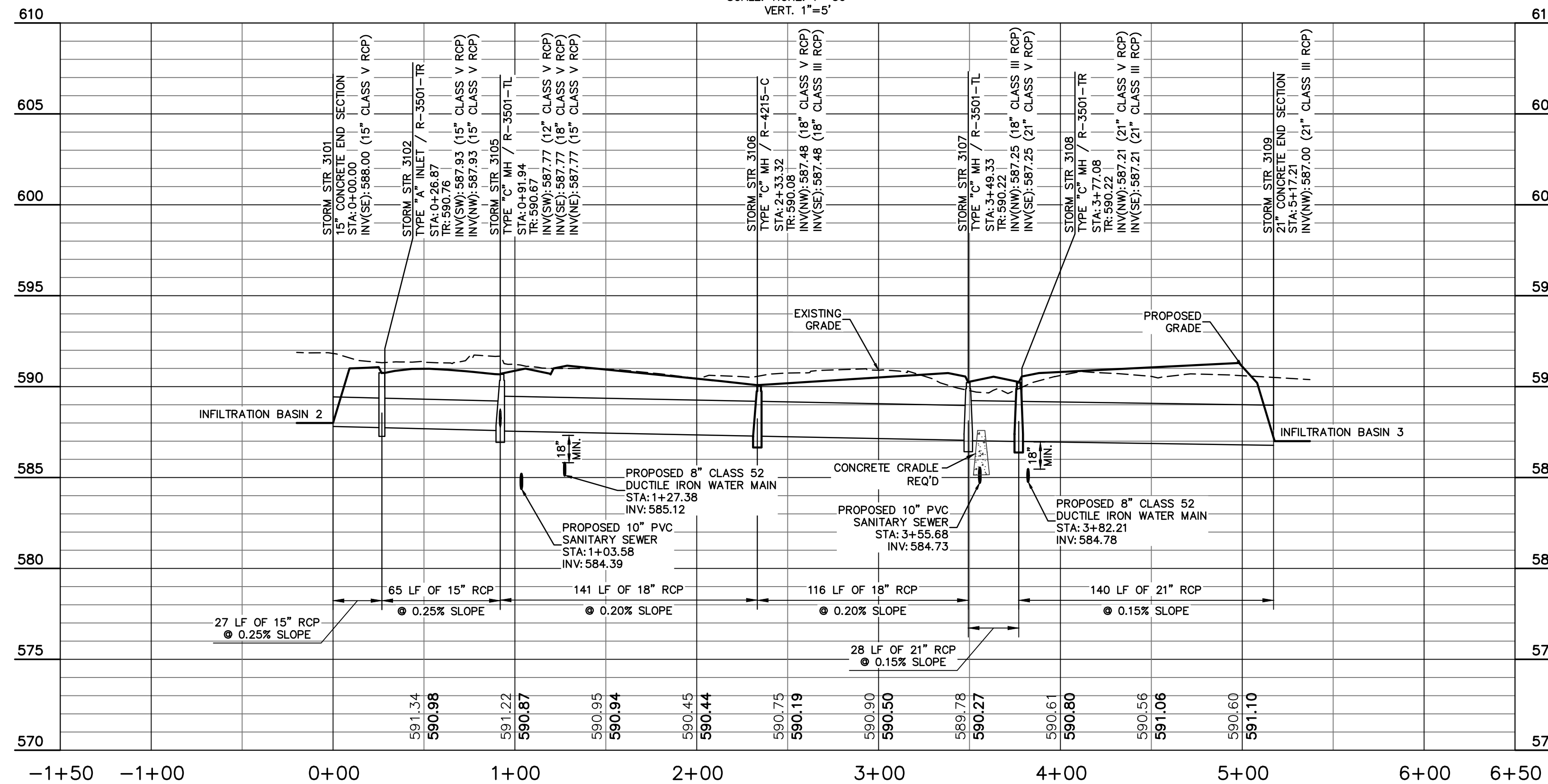
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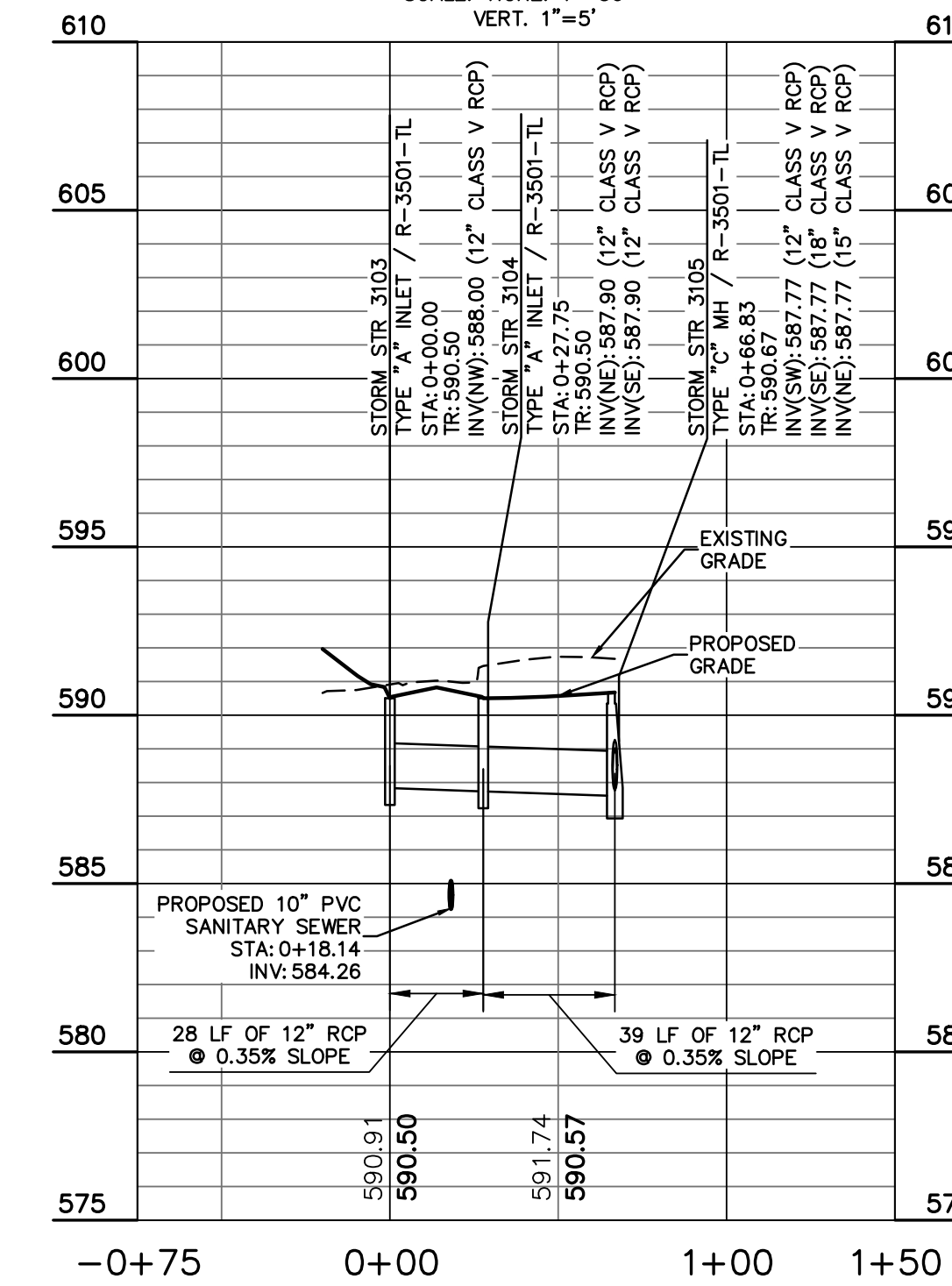
STORM SEWER PROFILE 9

SCALE: HORIZ. 1"=50'
 VERT. 1"=5'



STORM SEWER PROFILE 10

SCALE: HORIZ. 1"=50'
 VERT. 1"=5'

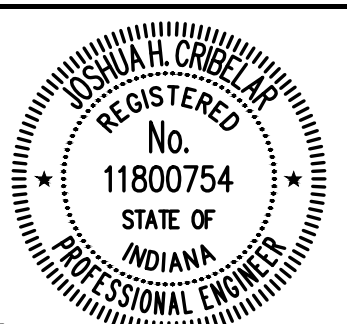


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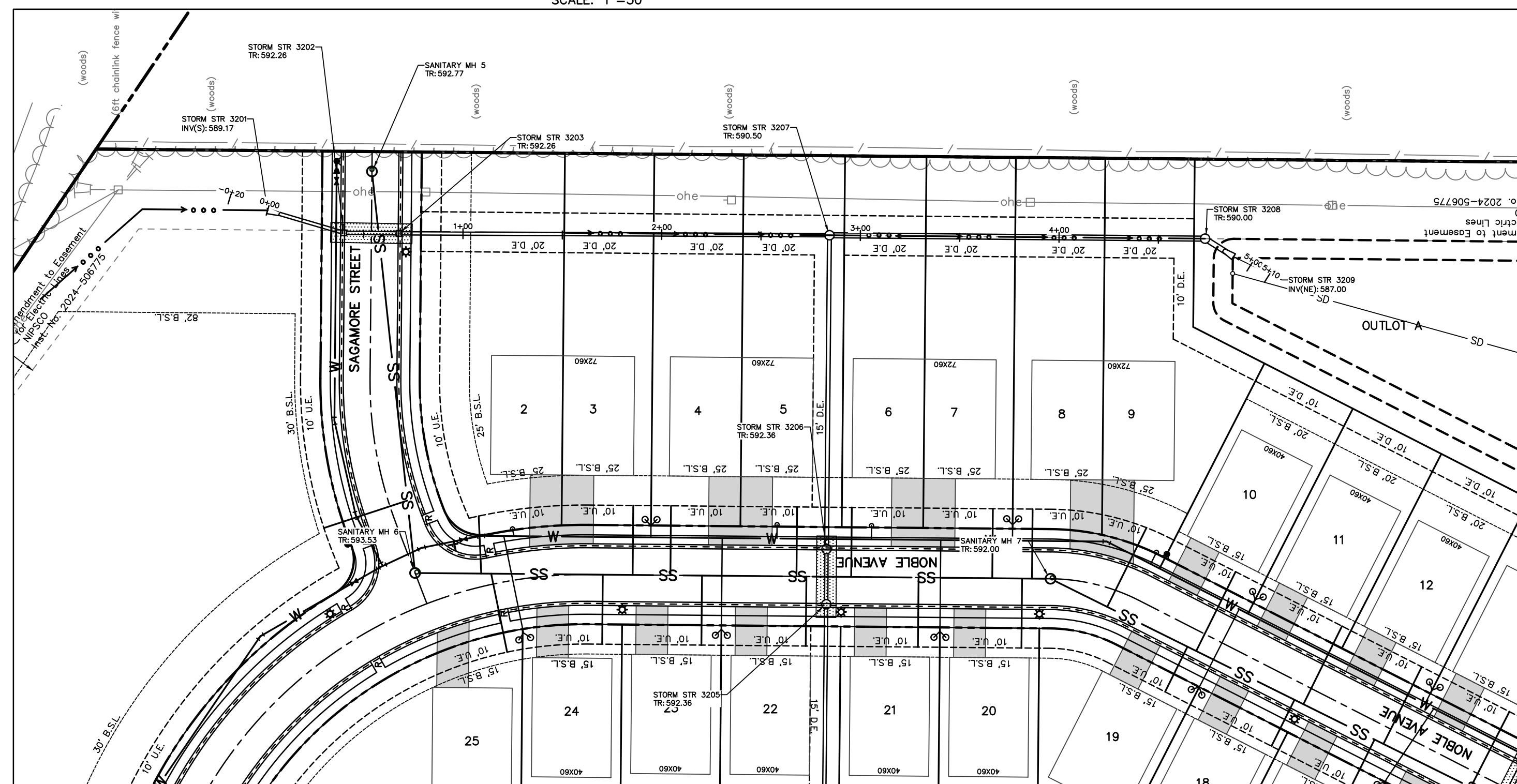
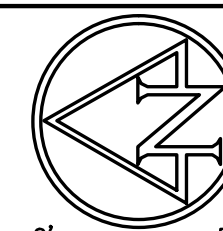
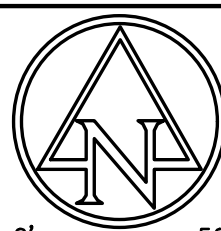
Project Number 2021.03290

STORM SEWER PLAN & PROFILE

C403

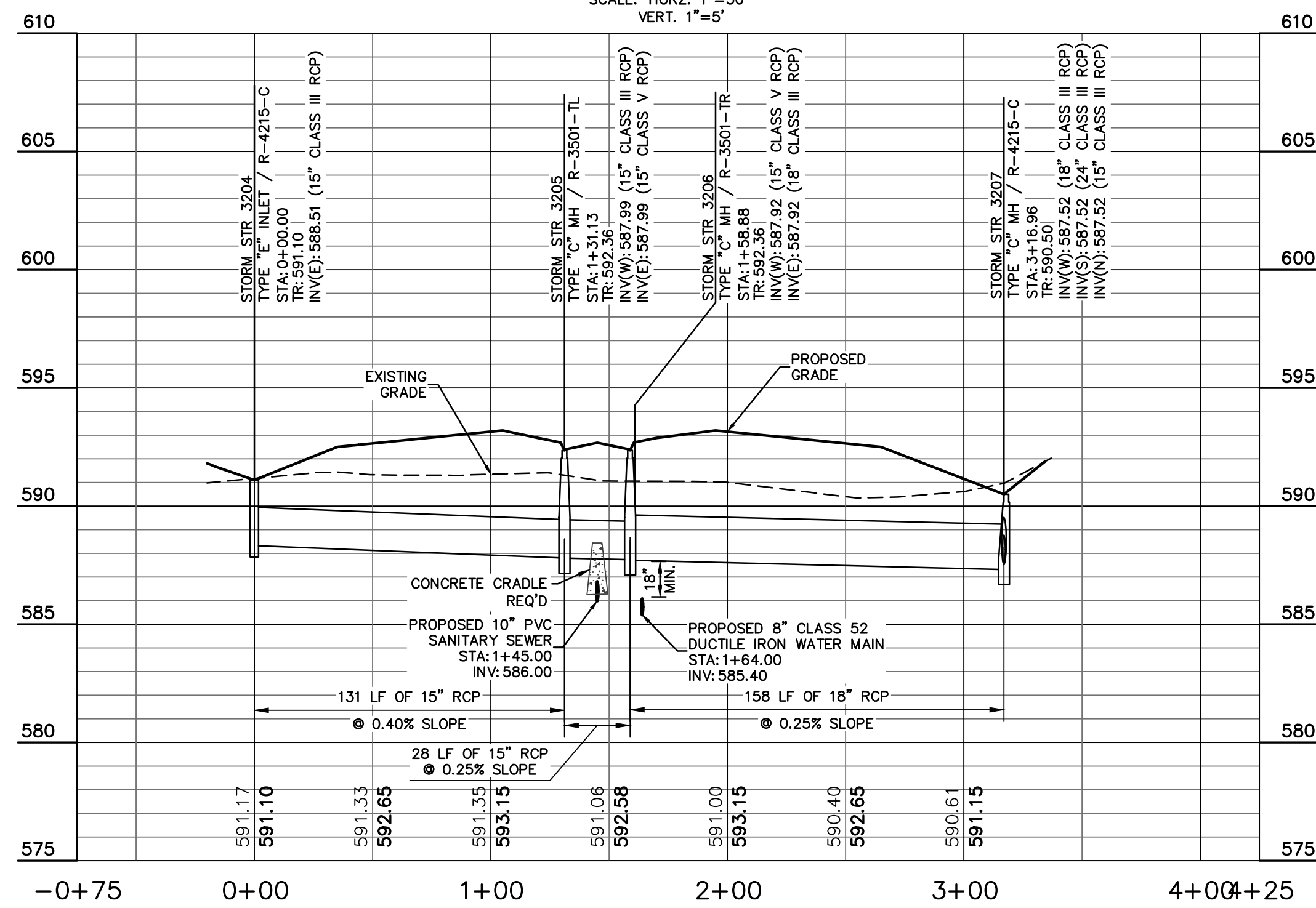
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 CALL TOLL FREE "811" OR 1-800-382-5544
 - INDIANA UNDERGROUND -



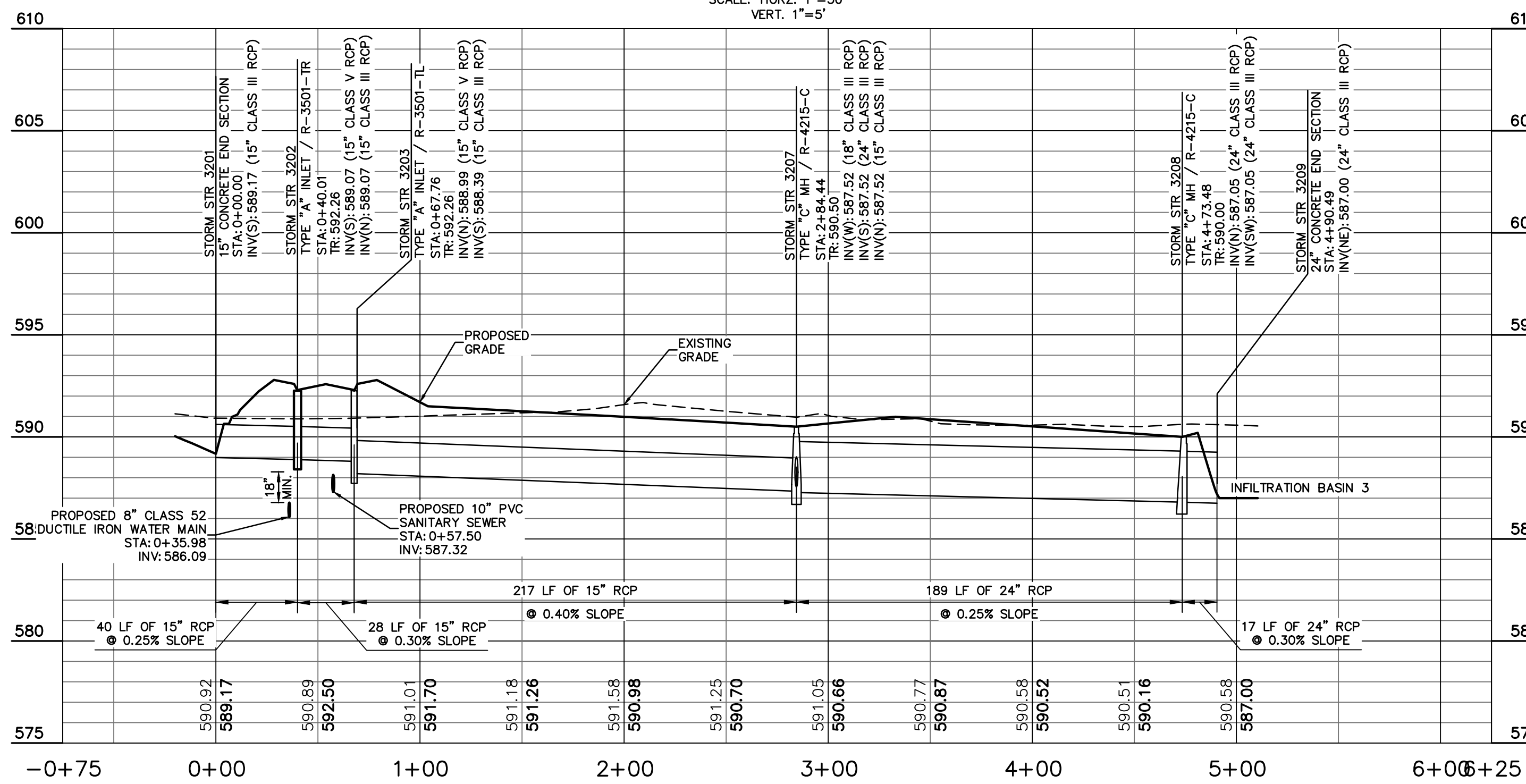
STORM SEWER PROFILE 11

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



STORM SEWER PROFILE 12

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



EXISTING LEGEND

- Temporary Bench Mark, Well, Combination Pole, Electric Meter Box, Electric Box, Gas Meter, Gas Marker Sign, Guy Wire, Telephone Handhole, Telephone Marker Sign, Telephone Pole, Telephone Pedestal, Buried Fiber Optic, Buried Electric Line, Buried Gas Line, Buried Telephone Line, Overhead Electric Line, Overhead Telephone Line, Buried Water Line, Beehive Inlet, Curb Inlet, Fire Hydrant, Clean Out, Tree, Bush, Stump, Spigot, Mailbox, Pine, Post, Power Pole, Sign, Stand Pipe, Existing Pond, Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE, BUILDING SETBACK LINE, EASEMENT, WET DETENTION POND NORMAL POOL, LOT LINE, WATER MAIN, SANITARY MAIN, SWALE, 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB), STORM SEWER, OVERHEAD ELECTRIC, FIRE HYDRANT & WATER VALVE, WATER TEE, CROSS & BEND, BUILDING SETBACK LINE, DRAINAGE EASEMENT, DRAINAGE & UTILITY EASEMENT, INVERT ELEVATION, POINT OF CURVATURE/TANGENCY, POLYVINYL CHLORIDE PIPE, POINT OF VERTICAL INTERSECTION, RIGHT-OF-WAY, TOP OF RIM ELEVATION, SIGN/STREET LIGHT/UTILITY POLE

- STORM SEWER NOTES: 1. ALL CASTINGS SHALL BE LABELED "DUMP NO WASTE - DRAINS TO WATERWAY" n = 0.012 2. THE GRANULAR BACKFILL AREAS SHOWN IN PLAN VIEW ARE AN ESTIMATE PROVIDED BY THE ENGINEER. EXACT LIMITS OF GRANULAR BACKFILL ARE TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR BASED ON TRENCH WIDTH AND AS DIRECTED BY THE AUTHORITY HAVING JURISDICTION.

GRANULAR BACKFILL REQUIRED

- GENERAL NOTES: 1. CONTRACTOR SHALL PROTECT & NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION. 2. CONTRACTOR TO VERIFY LOCATION, SIZE & DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS. 3. SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

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CALL TOLL FREE "811" OR 1-800-382-5544 - INDIANA UNDERGROUND -



City of Hammond
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McDermott Jr.
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j.cristler@structurepoint.com

MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



Joshua H. Cristler
CERTIFIED BY

ISSUANCE INDEX

DATE:
11/14/2024
PROJECT PHASE:
CONSTRUCTION DOCUMENTS

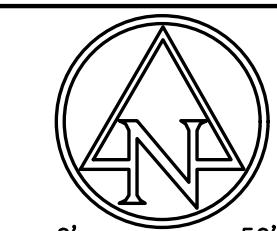
REVISION SCHEDULE

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

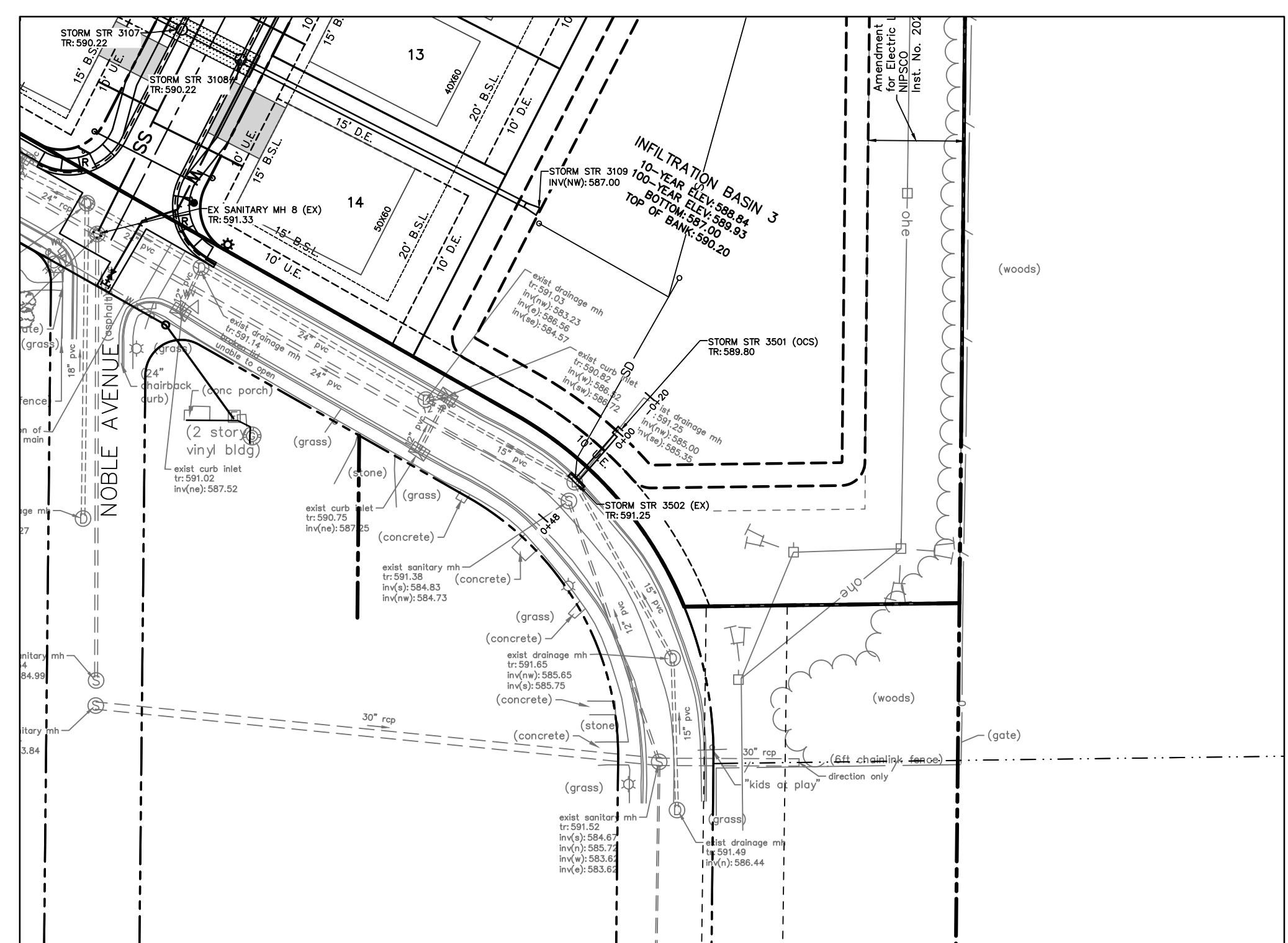
Project Number 2021.03290

STORM SEWER PLAN & PROFILE

C404



0' 50' 100'
SCALE: 1"=50'



EXISTING LEGEND

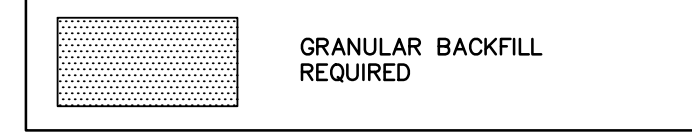
- Temporary Bench Mark
- Well
- Combination Pole
- Electric Meter Box
- Electric Box
- Gas Meter
- Gas Marker Sign
- Guy Wire
- Telephone Handhole
- Telephone Marker Sign
- Telephone Pole
- Telephone Pedestal
- Buried Fiber Optic
- Buried Electric Line
- Overhead Electric Line
- Buried Gas Line
- Buried Telephone Line
- Overhead Telephone Line
- Buried Water Line
- Beehive Inlet
- Curb Inlet
- Fire Hydrant
- Clean Out
- Tree
- Bush
- Stump
- Spigot
- Mailbox
- Pine
- Post
- Power Pole
- Sign
- Stand Pipe
- Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
- WET DETENTION POND NORMAL POOL
- LOT LINE
- WATER MAIN
- SS SANITARY MAIN
- SWALE
- 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- STORM SEWER
- OHE OVERHEAD ELECTRIC
- FIRE HYDRANT & WATER VALVE
- WATER TEE, CROSS & BEND
- B.S.L. BUILDING SETBACK LINE
- D.E. DRAINAGE EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
- INV INVERT ELEVATION
- PC/PT POINT OF CURVATURE/TANGENCY
- PVC POLYVINYL CHLORIDE PIPE
- PVI POINT OF VERTICAL INTERSECTION
- R/W RIGHT-OF-WAY
- TR TOP OF RIM ELEVATION
- TR SIGN/STREET LIGHT/UTILITY POLE

STORM SEWER NOTES:

- ALL CASTINGS SHALL BE LABELED "DUMP NO WASTE - DRAINS TO WATERWAY"
- MANNINGS COEFFICIENT $n = 0.012$
- THE GRANULAR BACKFILL AREAS SHOWN IN PLAN VIEW ARE AN ESTIMATE PROVIDED BY THE ENGINEER. EXACT LIMITS OF GRANULAR BACKFILL ARE TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR BASED ON TRENCH WIDTH AND AS DIRECTED BY THE AUTHORITY HAVING JURISDICTION.

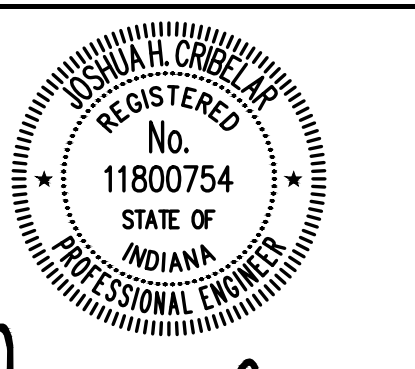


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MEMORIAL PARK REDEVELOPMENT

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Hammond, Indiana 46320



Joshua H. Crabel
CERTIFIED BY

ISSUANCE INDEX	
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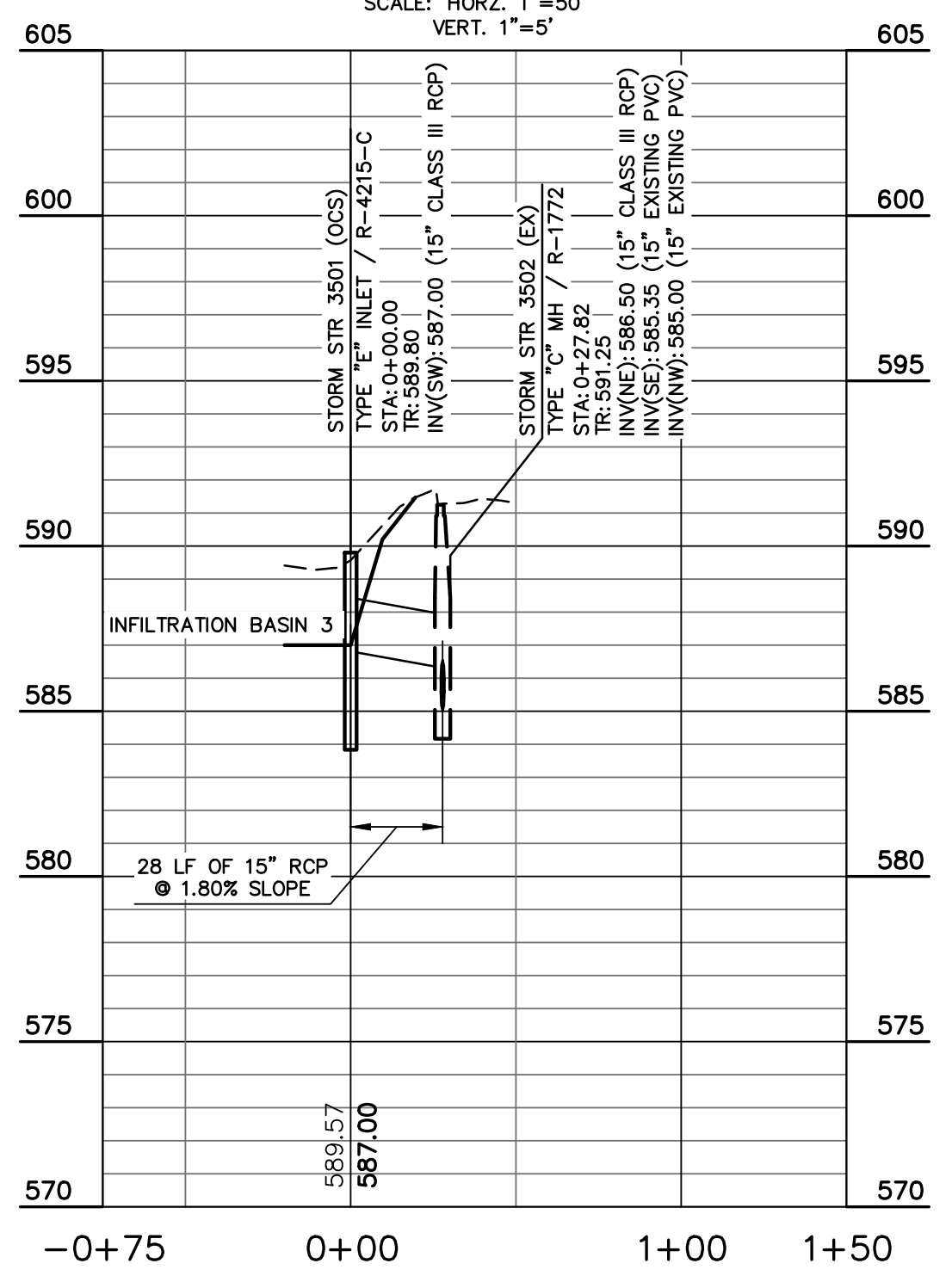
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

STORM SEWER PLAN & PROFILE

C405

STORM SEWER PROFILE 13

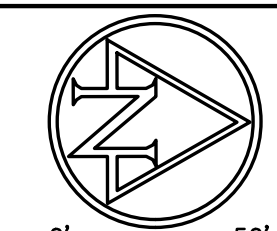


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INDIANA UNDERGROUND

PLOT DATE: 12/02/2024 4:35 PM
 DRAWING FILE: I:\indiana\p\projects\2021\03290\03290_C005_C405_STM_PP.dwg
 EDITED BY: M.V.NCH
 EDIT DATE: 11/8/2024



0' 50' 100'
SCALE: 1"=50'

EXISTING LEGEND

- ⊕ Temporary Bench Mark
- ⊕ Well
- ⊕ Combination Pole
- ⊕ Electric Meter Box
- ⊕ Electric Box
- ⊕ Gas Meter
- ⊕ Gas Marker Sign
- ⊕ Guy Wire
- ⊕ Telephone Handhole
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PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
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- D.&U.E. DRAINAGE & UTILITY EASEMENT
- D.U.&S.E. DRAINAGE UTILITY & SANITARY EASMT.
- INV. INVERT ELEVATION
- PVC POLYVINYL CHLORIDE PIPE
- TR TOP OF RIM ELEVATION
- SIGN/STREET LIGHT

SANITARY SEWER NOTES:

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2. WHERE SANITARY DISCHARGE CAN ENTER INTO A PUBLIC SANITARY SEWER SYSTEM BY GRAVITY FLOW, THE LOWEST FLOOR ELEVATION WHERE A PLUMBING FIXTURE OR FLOOR DRAIN IS INSTALLED MUST BE A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE LOWEST DOWNSTREAM OR UPSTREAM MANHOLE CASTING NEAREST TO THE SUBJECT LATERAL CONNECTION. WHERE THE DISCHARGE CANNOT ENTER A SYSTEM BY GRAVITY FLOW THE EFFLUENT SHALL BE DIRECTED INTO A TIGHTLY COVERED AND VENTED SUMP FROM WHICH THE EFFLUENT SHALL BE LIFTED AND DISCHARGED INTO THE SYSTEM A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE LOWEST DOWNSTREAM OR UPSTREAM MANHOLE CASTING NEAREST TO THE SUBJECT LATERAL CONNECTION.

GRANULAR BACKFILL REQUIRED

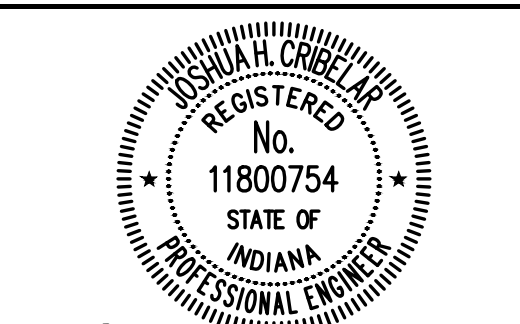


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MEMORIAL PARK REDEVELOPMENT

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Joshua H. Crisler
CERTIFIED BY

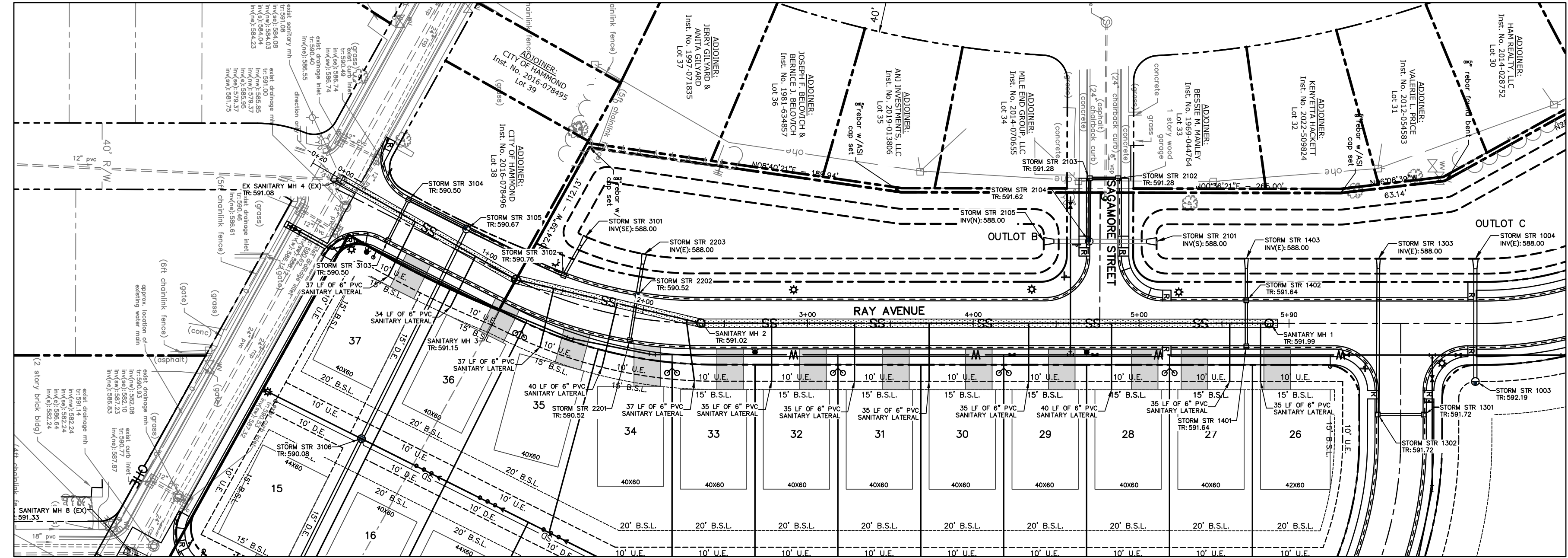
ISSUANCE INDEX	
DATE:	11/14/2024
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REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
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Project Number 2021.03290

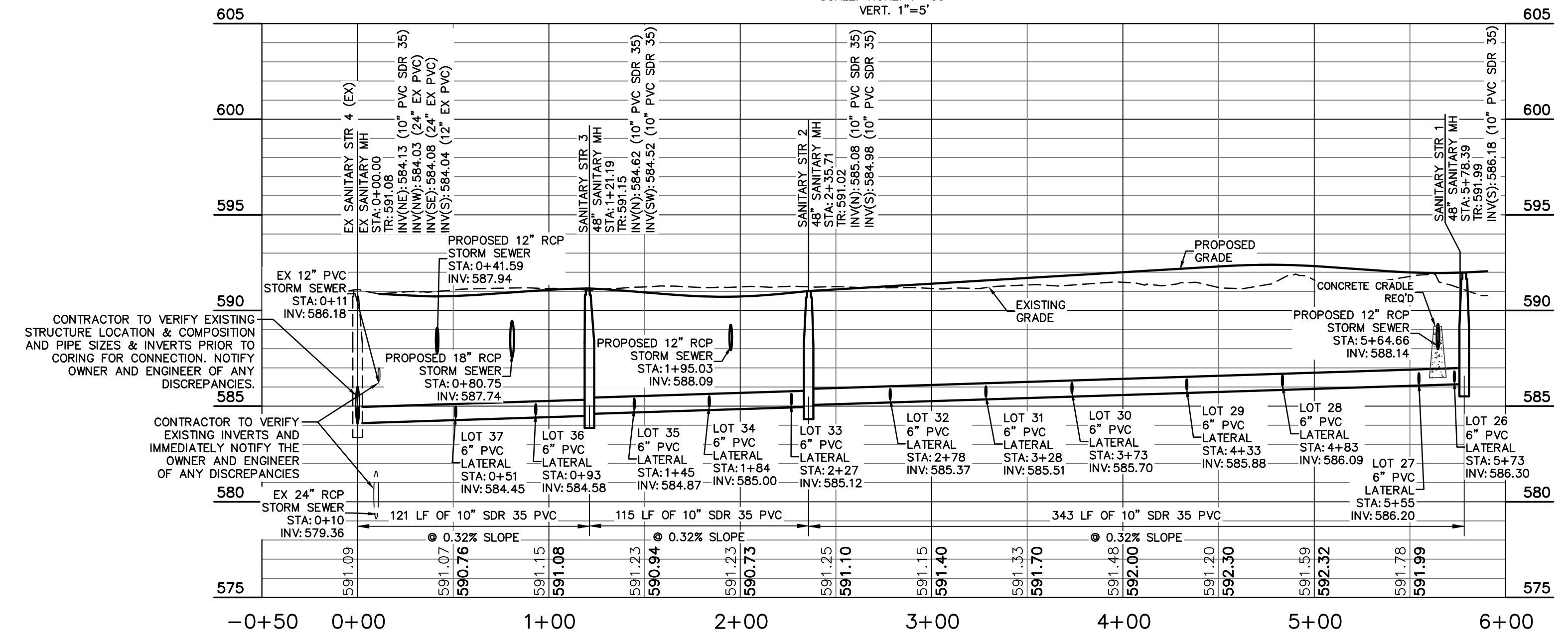
SANITARY SEWER PLAN & PROFILE

C411



SANITARY SEWER PROFILE RAY AVE

SCALE: HORZ. 1"=50'
VERT. 1"=5'



CONTRACTOR TO VERIFY EXISTING STRUCTURE LOCATION & COMPOSITION AND PIPE SIZES & INVERTS PRIOR TO CORING FOR CONNECTION. NOTIFY OWNER AND ENGINEER OF ANY DISCREPANCIES

CONTRACTOR TO VERIFY EXISTING INVERTS AND IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES

- GENERAL NOTES:**
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INDIANA UNDERGROUND

PLOT DATE: 12/02/2024 4:36 PM
 PLOT SCALE: 1:1
 EDITED BY: JCRIBELAR
 DRAWING FILE: I:\indianaplan\project\2021\03290\Drawings\Sanitary\Sanitary\03290_C411_SAN_PP.dwg
 DRAWING TITLE: 03290.DWG

STORM STRUCTURE DATA TABLE
NOTE: ALL CASTINGS SHALL BE LABELED "DUMP NO WASTE--DRAINS TO WATERWAY"

STR. NO.	STRUCTURE / CASTING TYPE	TOP OF RIM (TR)	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING GRADE (%)	REMARKS
1001	TYPE "C" MH / R-4342	591.01		74' OF 18" CLASS V RCP 588.15 (S) [1002]	0.20%	FUTURE LOT 1 CONNECTION
1002	18" CONCRETE END SECTION / -	589.71	18" CLASS V RCP 588.00 (N) [1001]			
1003	TYPE "C" MH / R-4342	592.19		74' OF 18" CLASS V RCP 588.15 (W) [1004]	0.20%	FUTURE LOT 1 CONNECTION
1004	18" CONCRETE END SECTION / -	590.91	18" CLASS V RCP 588.00 (E) [1003]			
1101	18" CONCRETE END SECTION / -	590.13		157' OF 18" CLASS III RCP 588.42 (SW) [1102]	0.20%	
1102	TYPE "C" MH / R-3501-TR	590.86	18" CLASS III RCP 588.10 (NE) [1101]	52' OF 18" CLASS V RCP 588.10 (S) [1103]	0.20%	CURB UNDERDRAINS
1103	18" CONCRETE END SECTION / -	589.71	18" CLASS V RCP 588.00 (N) [1102]			
1201	TYPE "A" INLET / R-3501-TL	590.45		27' OF 12" CLASS III RCP 588.18 (SW) [1202]	0.35%	CURB UNDERDRAINS
1202	TYPE "A" INLET / R-3501-TR	590.46	12" CLASS III RCP 588.09 (NE) [1201]	26' OF 12" CLASS III RCP 588.09 (SW) [1203]	0.35%	CURB UNDERDRAINS
1203	12" CONCRETE END SECTION / -	589.17	12" CLASS III RCP 588.00 (NE) [1202]			
1301	TYPE "A" INLET / R-3501-TL	591.72		28' OF 12" CLASS V RCP 588.43 (S) [1302]	0.35%	CURB UNDERDRAINS
1302	TYPE "A" INLET / R-3501-TR	591.72	12" CLASS V RCP 588.33 (N) [1301]	94' OF 15" CLASS V RCP 588.33 (W) [1303]	0.35%	CURB UNDERDRAINS
1303	15" CONCRETE END SECTION / -	589.44	15" CLASS V RCP 588.00 (E) [1302]			
1401	TYPE "A" INLET / R-3501-TR	591.64		28' OF 12" CLASS V RCP 588.18 (W) [1402]	0.35%	CURB UNDERDRAINS
1402	TYPE "A" INLET / R-3501-TR	591.64	12" CLASS V RCP 588.09 (E) [1401]	25' OF 12" CLASS III RCP 588.09 (W) [1403]	0.35%	CURB UNDERDRAINS
1403	12" CONCRETE END SECTION / -	589.17	12" CLASS III RCP 588.00 (E) [1402]			
2101	24" CONCRETE END SECTION / -	590.25		41' OF 24" CLASS V RCP 588.00 (S) [2104]	0.00%	
2102	TYPE "A" INLET / R-3501-TL	591.28		17' OF 12" CLASS V RCP 588.19 (S) [2103]	0.35%	CURB UNDERDRAIN
2103	TYPE "A" INLET / R-3501-TR	591.28	12" CLASS V RCP 588.13 (N) [2102]	38' OF 12" CLASS V RCP 588.13 (E) [2104]	0.35%	CURB UNDERDRAIN
2104	TYPE "C" MH / R-3501-TR	591.62	12" CLASS V RCP 588.00 (W) [2103] 24" CLASS V RCP 588.00 (N) [2101]	27' OF 24" CLASS V RCP 588.00 (S) [2105]	0.00%	CURB UNDERDRAINS
2105	24" CONCRETE END SECTION / -	590.25	24" CLASS V RCP 588.00 (N) [2104]			
2201	TYPE "A" INLET / R-3501-TR	590.52		28' OF 12" CLASS V RCP 588.16 (W) [2202]	0.35%	CURB UNDERDRAINS
2202	TYPE "A" INLET / R-3501-TL	590.52	12" CLASS V RCP 588.06 (E) [2201]	25' OF 15" CLASS III RCP 588.06 (W) [2203]	0.25%	CURB UNDERDRAINS
2203	15" CONCRETE END SECTION / -	589.44	15" CLASS III RCP 588.00 (E) [2202]			
3101	15" CONCRETE END SECTION / -	589.43		27' OF 15" CLASS V RCP 588.00 (SE) [3102]	0.25%	
3102	TYPE "A" INLET / R-3501-TR	590.76	15" CLASS V RCP 587.93 (NW) [3101]	65' OF 15" CLASS V RCP 587.93 (SW) [3105]	0.25%	CURB UNDERDRAINS
3103	TYPE "A" INLET / R-3501-TL	590.50		28' OF 12" CLASS V RCP 588.00 (NW) [3104]	0.35%	CURB UNDERDRAINS
3104	TYPE "A" INLET / R-3501-TL	590.50	12" CLASS V RCP 587.90 (SE) [3103]	39' OF 12" CLASS V RCP 587.90 (NE) [3105]	0.35%	CURB UNDERDRAINS
3105	TYPE "C" MH / R-3501-TL	590.67	12" CLASS V RCP 587.77 (SW) [3104] 15" CLASS V RCP 587.77 (NE) [3102]	141' OF 18" CLASS V RCP 587.77 (SE) [3106]	0.20%	CURB UNDERDRAINS
3106	TYPE "C" MH / R-4215-C	590.08	18" CLASS V RCP 587.48 (NW) [3105]	116' OF 18" CLASS III RCP 587.48 (SE) [3107]	0.20%	SWALE UNDERDRAINS
3107	TYPE "C" MH / R-3501-TL	590.22	18" CLASS III RCP 587.25 (NW) [3106]	28' OF 21" CLASS V RCP 587.25 (SE) [3108]	0.15%	CURB UNDERDRAINS
3108	TYPE "C" MH / R-3501-TR	590.22	21" CLASS V RCP 587.21 (NW) [3107]	140' OF 21" CLASS III RCP 587.21 (SE) [3109]	0.15%	CURB UNDERDRAINS
3109	21" CONCRETE END SECTION / -	588.98	21" CLASS III RCP 587.00 (NW) [3108]			
3201	15" CONCRETE END SECTION / -	590.61		40' OF 15" CLASS III RCP 589.17 (S) [3202]	0.25%	
3202	TYPE "A" INLET / R-3501-TR	592.26	15" CLASS III RCP 589.07 (N) [3201]	28' OF 15" CLASS V RCP 589.07 (S) [3203]	0.30%	CURB UNDERDRAINS
3203	TYPE "A" INLET / R-3501-TL	592.26	15" CLASS V RCP 588.99 (N) [3202]	217' OF 15" CLASS III RCP 588.39 (S) [3207]	0.40%	CURB UNDERDRAINS
3204	TYPE "E" INLET / R-4215-C	591.10		131' OF 15" CLASS III RCP 588.51 (E) [3205]	0.40%	SWALE UNDERDRAINS
3205	TYPE "C" MH / R-3501-TL	592.36	15" CLASS III RCP 587.99 (W) [3204]	28' OF 15" CLASS V RCP 587.99 (E) [3206]	0.25%	CURB UNDERDRAINS
3206	TYPE "C" MH / R-3501-TR	592.36	15" CLASS V RCP 587.92 (W) [3205]	158' OF 18" CLASS III RCP 587.92 (E) [3207]	0.25%	CURB UNDERDRAINS
3207	TYPE "C" MH / R-4215-C	590.50	18" CLASS III RCP 587.52 (W) [3206] 15" CLASS III RCP 587.52 (N) [3203]	189' OF 24" CLASS III RCP 587.52 (S) [3208]	0.25%	
3208	TYPE "C" MH / R-4215-C	590.00	24" CLASS III RCP 587.05 (N) [3207]	17' OF 24" CLASS III RCP 587.05 (SW) [3209]	0.30%	
3209	24" CONCRETE END SECTION / -	589.25	24" CLASS III RCP 587.00 (NE) [3208]			
3501 (OCS)	TYPE "E" INLET / R-4215-C	589.80		28' OF 15" CLASS III RCP 587.00 (SW) [3502 (EX)]	1.80%	OUTLET CONTROL STRUCTURE
3502 (EX)	EXISTING STRUCTURE	591.25	15" CLASS III RCP 586.50 (NE) [3501 (OCS)] 15" EXISTING PVC 585.35 (SE) []	3' OF 15" EXISTING PVC 585.00 (NW) []	0.00%	CONTRACTOR TO VERIFY EXISTING STRUCTURE SIZE, COMPOSITION, AND INVERTS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER AND OWNER OF ANY ISSUE WITH PROPOSED CONNECTIONS.

NOTE: TR IS TOP OF RIM. BELOW IS A LIST OF THE ELEVATIONS THAT THE TOP OF RIM ELEVATION IS MEASURED:
R-3501-TR & TL: TOP OF RIM IS THE CASTING ELEVATION AT THE GUTTER LINE.
R-4215-C: TOP OF RIM IS THE ELEVATION AT THE LOWEST OPENING OF THE CASTING.
R-4342: TOP OF RIM IS THE ELEVATION AT THE LOWEST OPENING OF THE CASTING.

NEENAH CASTINGS PROVIDED AS REFERENCE ONLY. APPROVED EQUALS ARE ACCEPTABLE.

SANITARY STRUCTURE DATA TABLE

STR. NO.	STRUCTURE	TOP OF RIM (TR)	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING GRADE (%)	REMARKS
1	48" SANITARY MANHOLE	591.99		343' OF 10" PVC SDR 35 586.18 (S) [2]	0.32%	
2	48" SANITARY MANHOLE	591.02	10" PVC SDR 35 585.08 (N) [1]	115' OF 10" PVC SDR 35 584.98 (S) [3]	0.32%	
3	48" SANITARY MANHOLE	591.15	10" PVC SDR 35 584.62 (N) [2]	121' OF 10" PVC SDR 35 584.52 (SW) [4 (EX)]	0.32%	
4 (EX)	EXISTING STRUCTURE	591.08	10" PVC SDR 35 584.13 (NE) [3] 24" EX PVC 584.08 (SE) [] 12" EX PVC 584.04 (S) []	3' OF 24" EX PVC 584.03 (NW) []	0.00%	CONTRACTOR TO VERIFY EXISTING STRUCTURE SIZE, COMPOSITION, AND INVERTS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER AND OWNER OF ANY ISSUE WITH PROPOSED CONNECTION.
5	48" SANITARY MANHOLE	592.77		203' OF 10" PVC SDR 35 587.42 (W) [6]	0.32%	
6	48" SANITARY MANHOLE	593.53	10" PVC SDR 35 586.76 (E) [5]	320' OF 10" PVC SDR 35 586.66 (S) [7]	0.32%	
7	48" SANITARY MANHOLE	592.00	10" PVC SDR 35 585.64 (N) [6]	347' OF 10" PVC SDR 35 585.54 (SW) [8 (EX)]	0.32%	
8 (EX)	EXISTING STRUCTURE	591.33	10" PVC SDR 35 584.43 (NE) [7] 15" EX PVC 584.38 (S) [] 24" EX PVC 584.38 (SE) []	2' OF 24" EX PVC 584.33 (NW) []	0.00%	CONTRACTOR TO VERIFY EXISTING STRUCTURE SIZE, COMPOSITION, AND INVERTS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER AND OWNER OF ANY ISSUE WITH PROPOSED CONNECTION.
9	48" SANITARY MANHOLE	591.54		3' OF 8" EX VCP 586.06 (W) []	0.00%	CONTRACTOR TO VERIFY EXISTING PIPE INVERT, SIZE, AND MATERIAL PRIOR TO CONSTRUCTION. NOTIFY ENGINEER AND OWNER OF ANY ISSUE WITH PROPOSED CONNECTION.

NOTE: TR IS THE TOP OF RIM AT THE CENTER OF THE CASTING

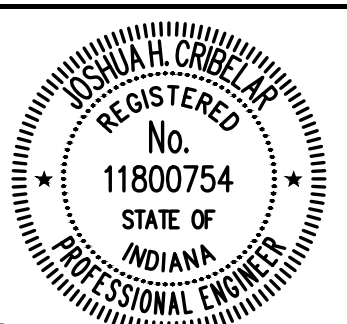


City of Hammond
Mayor Thomas M.
McDermott Jr.
5925 Calumet Avenue
Hammond, IN 46320



MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



Joshua H. Crabel
CERTIFIED BY

ISSUANCE INDEX

DATE:	11/14/2024
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1	ADDENDUM #2	12/05/24

Project Number 2021.03290

STORM & SANITARY SEWER DATA TABLES
C415

GENERAL NOTES:

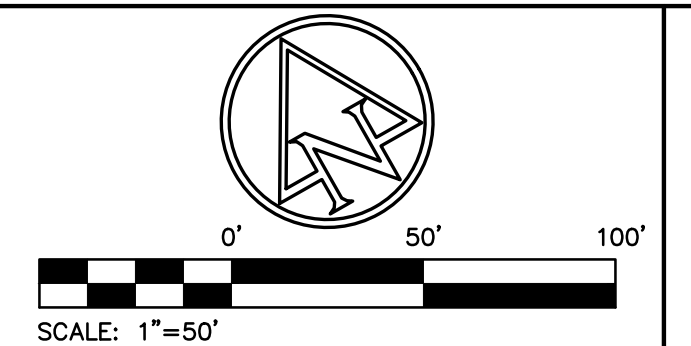
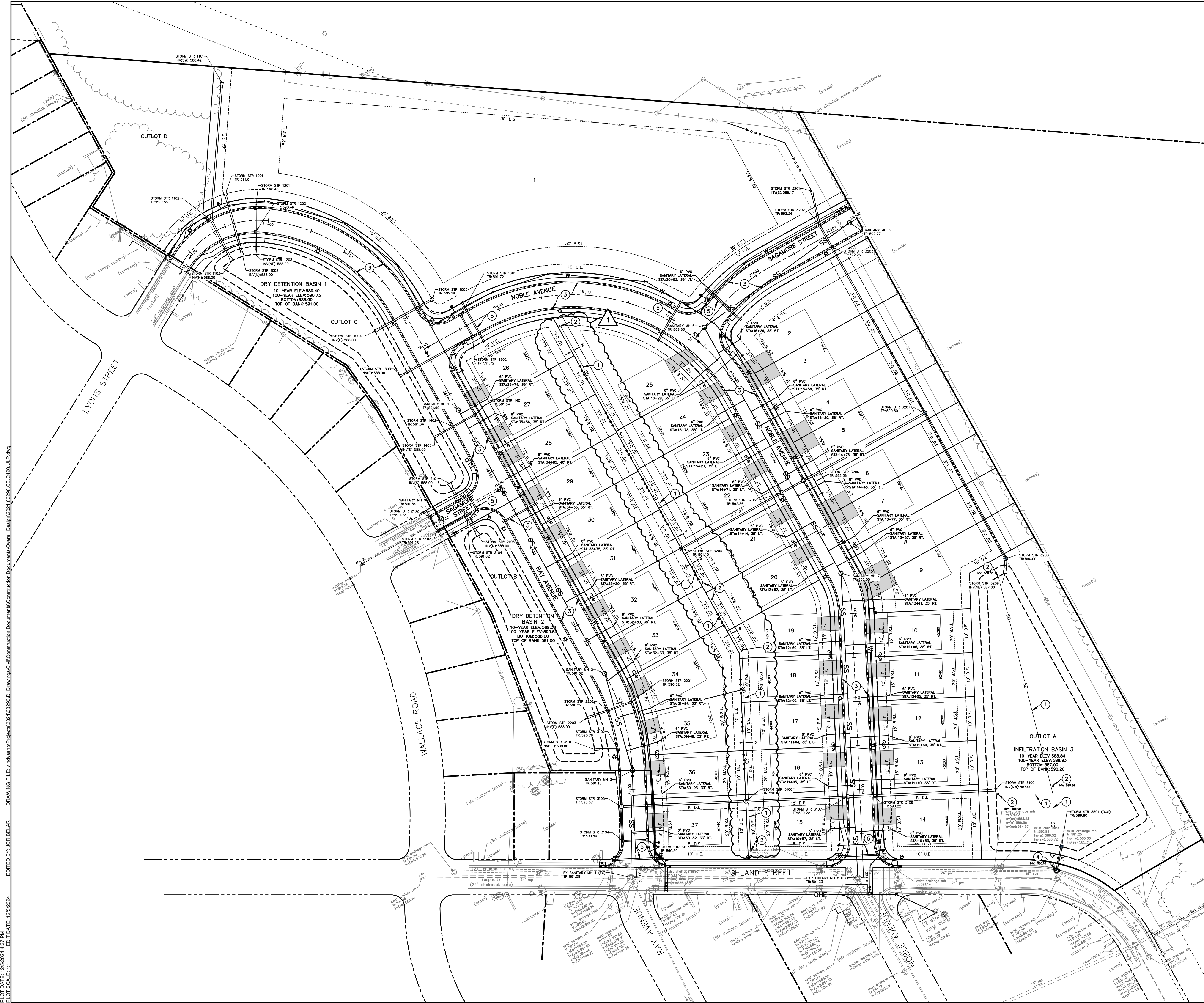
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CALL TOLL FREE "811" OR 1-800-382-5544
INDIANA UNDERGROUND

DRAWING FILE: \\indy\apps\Projects\2021\03290\03290.D Drawing: Civil/Construction Documents/Construction Documents\Overall_Drawing\03290_CE_C410_SAN_PP.dwg
EDITED BY: JCRBELAR
PLOT DATE: 12/02/2024 4:37 PM
PLOT SCALE: 1:1



EXISTING LEGEND

- ⊕ Temporary Bench Mark
- ⊙ Well
- ⊠ Combination Pole
- ⊞ Electric Meter Box
- ⊞ Electric Box
- ⊞ Gas Meter
- ⊞ Gas Marker Sign
- ⊞ Guy Wire
- ⊞ Telephone Handhole
- ⊞ Telephone Marker Sign
- ⊞ Telephone Pole
- ⊞ Telephone Pedestal
- ⊞ Buried Fiber Optic
- ⊞ Overhead Electric Line
- ⊞ Buried Gas Line
- ⊞ Buried Telephone Line
- ⊞ Overhead Telephone Line
- ⊞ Buried Water Line
- ⊞ Beehive Inlet
- ⊞ Curb Inlet
- ⊞ Fire Hydrant
- ⊞ Clean Out
- ⊞ Tree
- ⊞ Bush
- ⊞ Stump
- ⊞ Spigot
- ⊞ Mailbox
- ⊞ Pine
- ⊞ Post
- ⊞ Power Pole
- ⊞ Sign
- ⊞ Stand Pipe
- ⊞ Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
- WET DETENTION POND NORMAL POOL
- LOT LINE
- WATER MAIN
- ⊙ SS ⊙ SANITARY MAIN
- ⊙ SW ⊙ SWALE
- ⊙ SD ⊙ 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- ⊙ STORM SEWER
- ⊙ FIRE HYDRANT & WATER VALVE
- ⊙ WATER TEE, CROSS & BEND
- B.S.L. BUILDING SETBACK LINE
- D.E. DRAINAGE EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
- INV INVERT ELEVATION
- PVC POLYVINYL CHLORIDE PIPE
- TR TOP OF RIM ELEVATION
- ⊙ SIGN/STREET LIGHT

KEYNOTES

1. 6" DOUBLE-WALL PERFORATED SUBSURFACE SWALE UNDERDRAIN.
2. SUBSURFACE UNDERDRAIN RISER.
3. 6" DOUBLE-WALL PERFORATED SUBSURFACE CURB UNDERDRAIN.
4. UNDERDRAIN TO CONNECT TO EXISTING STORM SEWER.
5. THREE (3) 4" SCHEDULE 40 PVC CONDUITS FOR DRY UTILITY USE. 2' DEEP MARKED WITH 2"x4"x8" VERTICALLY AT EACH END.

NOTE: 6" PVC SANITARY LATERALS TO BE SDR-35 PVC INSTALLED AT 1.04% MIN. SLOPE TO MAXIMIZE DEPTH. TERMINATION POINT OF LATERALS TO BE MARKED BY VERTICAL PIPE PROTRUDING FROM SURFACE AT LEAST 48".



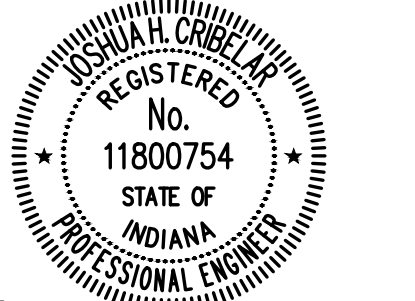
City of Hammond
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MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



Joshua H. Cibula
CERTIFIED BY

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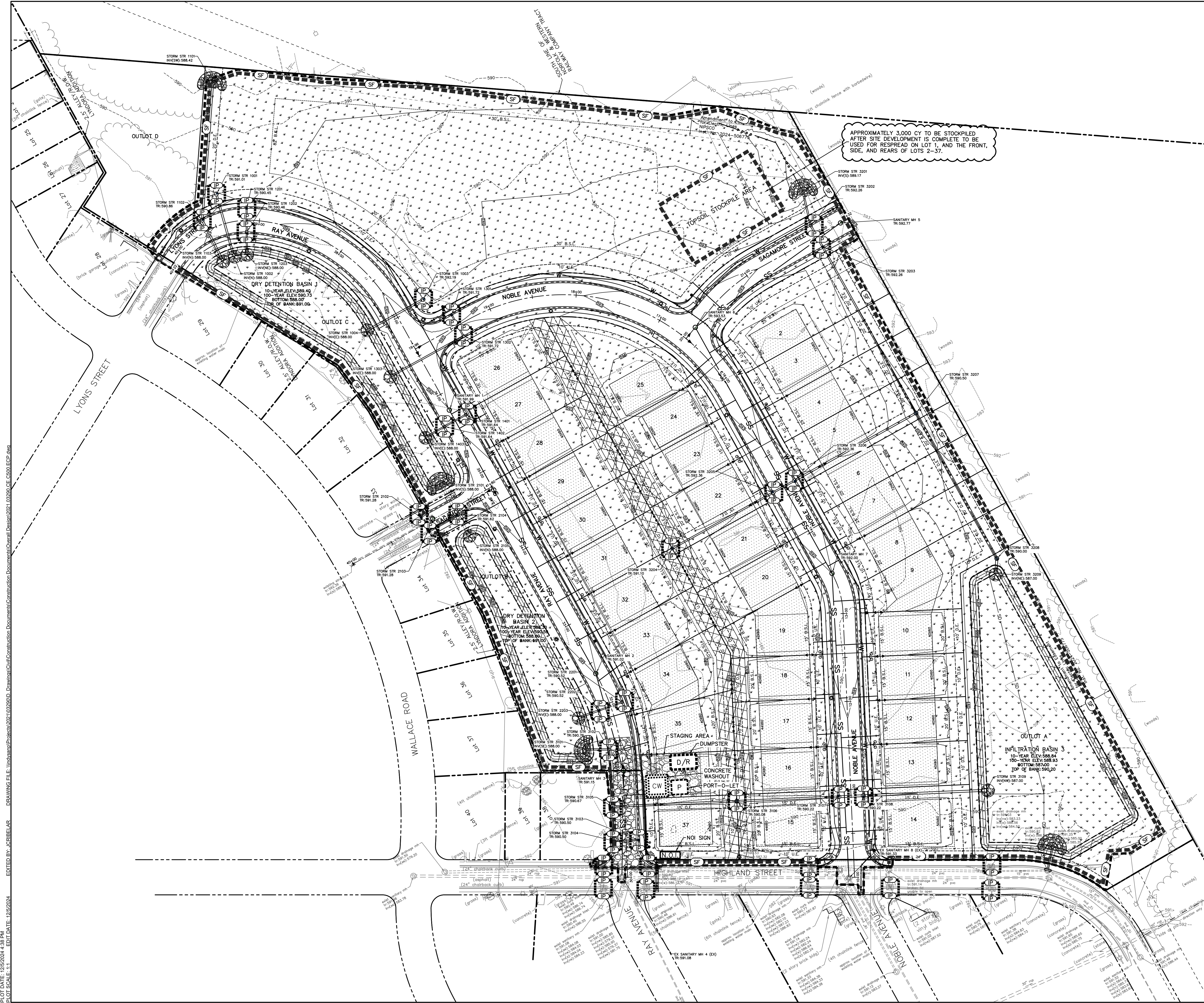
UTILITY LATERAL PLAN

C420

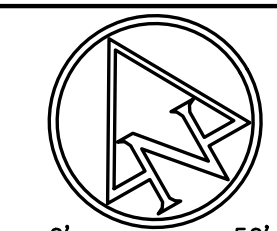
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INDIANA UNDERGROUND

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PLOT DATE: 12/05/2024 4:37 PM
PLOT SCALE: 1:1



APPROXIMATELY 3,000 CY TO BE STOCKPILED AFTER SITE DEVELOPMENT IS COMPLETE TO BE USED FOR RESPREAD ON LOT 1, AND THE FRONT, SIDE, AND REARS OF LOTS 2-37.



SCALE: 1"=50'

EXISTING LEGEND

- ⊕ Temporary Bench Mark
- ⊙ Well
- ⊕ Combination Pole
- ⊕ Electric Meter Box
- ⊕ Electric Box
- ⊕ Gas Meter
- ⊕ Gas Marker Sign
- ⊕ Guy Wire
- ⊕ Telephone Handhole
- ⊕ Telephone Marker Sign
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- STORM SEWER
- ⊕ FIRE HYDRANT & WATER VALVE
- ⊕ WATER TEE, CROSS & BEND
- A.E. ACCESS EASEMENT
- AC/SF ACRE/SQUARE FEET
- B.S.L. BUILDING SETBACK LINE
- B/B BACK TO BACK
- D.E. DRAINAGE EASEMENT
- D.&A.E. DRAINAGE & ACCESS EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
- D.U.&S.E. DRAINAGE UTILITY & SANITARY EASMT.
- FL FLOWLINE
- HP/LP HIGH POINT/LOW POINT
- INV INVERT ELEVATION
- L.E. LANDSCAPE EASEMENT
- ME MATCH EXISTING
- PVC POLYVINYL CHLORIDE PIPE
- R/W RIGHT-OF-WAY
- S.S.E. SANITARY SEWER EASEMENT
- TR TOP OF RIM ELEVATION
- ⊕ SIGN/STREET LIGHT

EROSION CONTROL LEGEND

- ⊕ SF SILT FENCE
- CONSTRUCTION LIMITS
- ⊕ IP INLET PROTECTION
- AREA SUBJECT TO TEMPORARY SEEDING DURING CONSTRUCTION AND PERMANENT SEEDING AFTER CONSTRUCTION IS COMPLETE
- TEMPORARY SEEDING
- EROSION CONTROL BLANKET WITH SEEDING
- GRAVEL CONSTRUCTION ENTRANCE
- STAGING AREA
- ⊕ CW CONCRETE WASHOUT
- ⊕ D/R DUMPSTER / RECYCLING AREA
- ⊕ P PORT-O-LET
- ⊕ N.O.I. N.O.I. SIGN POSTING
- ⊕ ROCK DONUT
- ⊕ OUTLET PROTECTION

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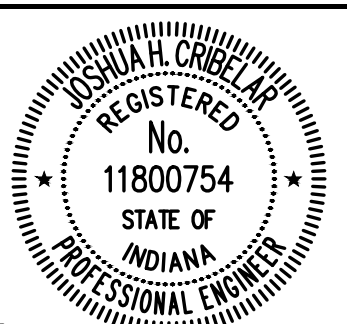
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MEMORIAL PARK REDEVELOPMENT

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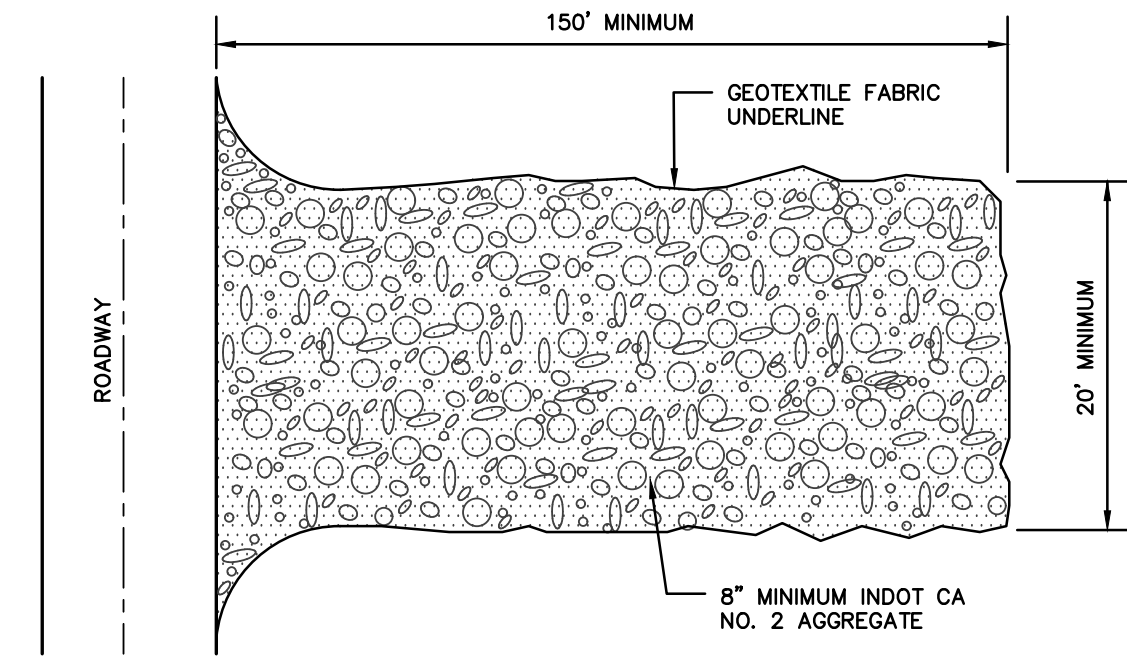
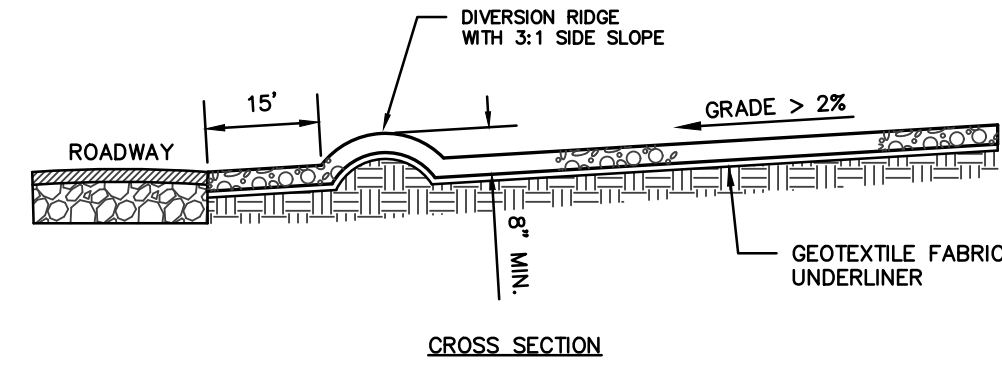
Project Number 2021.03290

EROSION CONTROL PLAN

C500

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 PLOT DATE: 12/20/24 4:38 PM
 PLOT SCALE: 1:1
 EDIT DATE: 12/20/24
 EDITED BY: JCRIBELAR

SITE NAME	B1 DESCRIPTION OF POTENTIAL POLLUTANT GENERATING SOURCES AND POLLUTANTS, INCLUDING ALL POTENTIAL NON-STORMWATER DISCHARGES.	B12 PLANNED CONSTRUCTION SEQUENCE THAT DESCRIBES THE IMPLEMENTATION OF STORMWATER QUALITY MEASURES IN RELATION TO LAND DISTURBANCE.	C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE.
<p>PROJECT LOCATION</p> <p>The area scheduled for construction is known as "Memorial Park Redevelopment" (hereinafter referred to as the "Project").</p> <p>The property is located 350' Southeast of the Intersection of Columbia Avenue and Highland Street, between Wallace Street and Willard Road in Hammond, Indiana.</p> <p>NOTICE OF INTENT</p> <p>All parties defined as owners or operators must submit a Construction Stormwater General Permit (CSGP) not less than 48 hours prior to commencement of on-site construction activities. Submittal of late CSGP's is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an operator is defined as any party meeting either of the following requirements:</p> <ol style="list-style-type: none"> The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions. 	<p>The following potential pollutant sources may be associated with construction activities on site:</p> <ul style="list-style-type: none"> Material storage areas (more specifically described below) Construction waste material Fuel storage areas and fueling stations Exposed soils Leaking vehicles and equipment Sanitary waste from temporary toilet facilities Litter Windblown dust Soil tracking off site from construction equipment <p>The following construction materials may be staged or stored on site at various points during development of the site:</p> <ul style="list-style-type: none"> Structural fill Pavement Base Stone HDPE, HP, PVC, RCP or Ductile Iron pipe Precast concrete, HDPE or PVC drainage and sanitary structures Rock rip-rap 	<p>Preconstruction Activity</p> <ul style="list-style-type: none"> The exact locations of all existing utilities within the project limits are to be verified prior to construction. Schedule pre-construction meeting with local stormwater authority. Install protection fencing for existing trees to remain in place within the project limits. Install protection fencing for existing karst in areas adjacent to project limits. <p>Construction Site Access</p> <ul style="list-style-type: none"> Install gravel construction entrance. Post the NOI at the construction entrance. Install construction staging pads, fueling station, material storage areas, concrete washout, construction parking areas and stabilize construction routes. <p>Perimeter Controls</p> <ul style="list-style-type: none"> Utilize the gravel construction entrance for installation of the perimeter silt fence. Add stone if needed. <p>Initial Land Clearing and Grading Activities</p> <ul style="list-style-type: none"> Add protection measures to existing inlets. Strip the topsoil and stabilize the topsoil stockpile. <p>Secondary Land Grading Activities</p> <ul style="list-style-type: none"> Begin site grading/construction of detention basins and stabilize any soil stockpiles that will be left dormant for more than 7 days. Complete the cut and fill on the site. Final grade and seed the pond slopes. Install check dams and stabilize slopes with erosion control blankets. Install storm sewer system and install inlet protection immediately upon completion of the inlet and install riprap outlet protection prior to installing outlets. <p>Surface Stabilization</p> <ul style="list-style-type: none"> Apply temporary seeding and stabilize slopes in areas where rough grading has been completed. Apply permanent seeding and stabilize slopes in areas where final grading has been completed. <p>Building Construction</p> <ul style="list-style-type: none"> Prior to building construction install stone surface for paved areas. Building pads left dormant for more than 7 days, must be temporarily seeded. Start building construction. Install staging area for building materials and stabilize. <p>Final Shaping/Landscaping</p> <ul style="list-style-type: none"> Utilize topsoil salvage in applicable areas and apply permanent seeding. Apply permanent seeding the perimeter of the site. Complete utility installation, curbs, paving and building construction. Install landscaping plant material and stabilize all disturbed areas. Remove all erosion and sediment control practices when areas have a uniform grass cover. 	<p>The proposed land use is a Single-Family Subdivision. The pollutants and sources of each pollutant normally expected from this type of land use are listed below:</p> <p>Pollutant Source: Passenger vehicles, delivery vehicles. Type of Pollutant: Oil, gasoline, diesel fuel, any hydrocarbon associated with vehicular fuels and lubricants, grease, antifreeze, windshield cleaner solution, brake fluid, brake dust, rubber, glass, metal and plastic fragments, grit, road de-icing materials.</p> <p>Pollutant Source: Building Type of Pollutant: Cleaning solutions or solvents, leaks from HVAC equipment, grit from roof drainage, aggregate or rubber fragments from roofing system.</p> <p>Pollutant Source: Trash dumpster Type of Pollutant: Cleaning solutions or solvents, litter (paper, plastic, general refuse associated with distribution operations), unsewn food products, bacteria.</p> <p>Pollutant Source: Parking lot Type of Pollutant: Any pollutant associated with vehicular sources, grit from asphalt wearing surface, bituminous compounds from periodic maintenance (sealing, resurfacing and patching), pavement de-icing materials, paint fragments from parking stall stripes, concrete fragments, wind-blown litter from off-site sources, elevated water temperatures from contact with impervious surfaces.</p> <p>Pollutant Source: Lawn and landscape areas Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings)</p>
<p>A1 INDEX OF THE LOCATION OF REQUIRED PLAN ELEMENTS IN THE CONSTRUCTION PLAN.</p> <p>Refer to the Sheet Index on the Title Sheet, Sheet C001.</p>	<p>B2 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for location and Erosion Control Details, Sheets C520-C522 for details/specifications. Construction entrances will be in place prior to any site construction or demolition.</p>	<p>B3 SPECIFICATIONS FOR TEMPORARY AND PERMANENT STABILIZATION.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for location and Erosion Control Details, Sheets C520-C522 for details/specifications. The SWP3 must be revised within 14 calendar days after the release to remain inactive for a period of 7 days or more. Refer to the Temporary and Permanent Seeding Details for specifics on soil amendments, seed mixtures and mulching.</p>	<p>C2 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES.</p> <p>This project was designed to meet local run-off rates per The Lake County Stormwater Ordinance and Technical Standards. These reduced run-off rates ensure the post-development run-off discharge is less than the pre-development discharge. Below is a summary of the proposed post-construction stormwater measures used to meet these rates.</p>
<p>A2 VICINITY MAP DEPICTING THE PROJECT SITE LOCATION IN RELATIONSHIP TO RECOGNIZABLE LOCAL LANDMARKS, TOWNS, AND MAJOR ROADS.</p> <p>Refer to the Title Sheet, Sheet C001 for the Vicinity Map.</p>	<p>B4 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for location and Erosion Control Details, Sheets C520-C522 for details/specifications. Proposed swales will be stabilized with erosion control blankets and rock check dams & rock donuts will be installed to slow runoff to inlets/end sections. Straw bales and silt fences will not be allowed as concentrated flow protection devices.</p>	<p>B5 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for location and Erosion Control Details, Sheets C520-C522 for details/specifications. Sheet flow areas will be protected by seed and mulch or hydroseeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 6:1 (horizontal to vertical). Silt Fencing will be utilized to prevent sedimentation from leaving the site.</p>	<p>Vegetated Swales: Vegetated swales are designed to reduce pollutants and sediment loads in storm water runoff. Storm water runoff is directed into the swale which conveys the runoff from the site. While moving through the swale, runoff velocity is greatly decreased allowing biofiltration (uptake of nutrients by plants), infiltration (percolation of water through the swale's porous soil substrate), and sedimentation (settling out of later suspended particles).</p>
<p>A3 NARRATIVE OF THE NATURE AND PURPOSE OF THE PROJECT.</p> <p>This project consists of the construction of a 37 lot single-family development, 1,885 feet of local roads will be connected to the existing water main at Roy Avenue, Noble Avenue and Lyons Street will be made as well as sanitary sewer connections to existing structures at Noble Avenue and Roy Avenue. Stormwater will be conveyed via sheet flow and storm pipes to the new ponds that will be constructed in this project and associated infrastructure.</p>	<p>B6 RUN-OFF CONTROL MEASURES.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for location and Erosion Control Details, Sheets C520-C522 for details/specifications. This project does not include the use of rock check dams, diversions, and slope drains.</p>	<p>B7 STORMWATER OUTLET PROTECTION LOCATION AND SPECIFICATIONS.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for location and Erosion Control Details, Sheets C520-C522 for details/specifications. Stormwater outlets will be protected by riprap aprons (Riprap Outlet Protection) to prevent scour erosion.</p>	<p>Permanently Vegetation Topsoil will be placed in lawn areas and seeded with grass, and graded not to exceed 3:1 slopes. Proposed landscape trees and shrubs will also be added. These Bio areas will act as a natural filter strip to help improve storm water quality. The vegetated areas will slow the velocities of storm water runoff, reduce sediment runoff, and reduce problems associated with mud or dust from bare soils.</p>
<p>A4 LATITUDE AND LONGITUDE TO THE NEAREST FIFTEEN (15) SECONDS.</p> <p>The project is located at a latitude of N43°39'19.39" and a longitude of W116°14'28.86".</p>	<p>B8 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for location and Erosion Control Details, Sheets C520-C522 for details/specifications. This project does not utilize grade stabilization measures.</p>	<p>B9 DEWATERING APPLICATIONS AND MANAGEMENT METHODS.</p> <p>Refer to the Erosion Control Details, Sheets C520-C522 for details/specifications of dewatering.</p>	<p>Good Housekeeping Measures Good Housekeeping measures such as regular street sweeping, installation of trash receptacles, and reduction in fertilizer overspray can be incorporated by the owner and/or occupant.</p>
<p>A5 LEGAL DESCRIPTION OF THE PROJECT SITE.</p> <p>Refer to the Title Sheet, Sheet C001 for the legal description. The site is located in NE Quarter, Section 6, Township 36 N, Range 9 W in North Township.</p>	<p>B10 MEASURES UTILIZED FOR WORK WITHIN WATERBODIES.</p> <p>There is not any work within waterbodies for this project.</p>	<p>B11 MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE.</p> <p>Inspection Schedule/Reporting All impacted areas, as well as all erosion and sediment control devices, will be inspected every seven (7) calendar days and within 24 hours after a rainfall of 0.5 inch or greater. Where sites have been final or temporarily stabilized or on sites where runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists), such inspections shall be conducted at least once every seven (7) calendar days.</p>	<p>C3 PLAN DETAILS FOR EACH STORMWATER MEASURE.</p> <p>Refer to the Development Plan, Sheet C200 for location and Stormwater Details, Sheet C600 for details of the stormwater measures in Section C2.</p>
<p>A6 1/4"=1'-0" HORIZONTAL SCALE SHOWING BUILDING LOT NUMBERS, BOUNDARIES, AND ROAD LAYOUT/NAMES.</p> <p>Refer to the DEVELOPMENT PLAN, Sheet C200, not to scale.</p>	<p>B12 MATERIAL HANDLING AND SPILL PREVENTION AND SPILL RESPONSE PLAN MEETING THE REQUIREMENT IN 327 IAC 2-6.1.</p> <p>Material Handling and Spill Prevention Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the National Response Center (1-800-424-8802) to properly report the spill. In addition, the operator shall submit a written description of the release (including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spills) to the local governing authority. The SWP3 must be revised within 14 calendar days after the release to reflect the release, stating the information above along with modifications to minimize the possibility of future occurrences. Each contractor and subcontractor is responsible for complying with these reporting requirements.</p>	<p>Spill Response Plan Minor - Small spills that typically involve oil, gasoline, paint, hydraulic fluid, etc., can be controlled by the first responder at the discovery of the spill. <ul style="list-style-type: none"> Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury. Use absorbent material to clean-up spill material and any subsequently contaminated soil and dispose of properly. </p>	<p>C4 SEQUENCE DESCRIBING STORMWATER MEASURE IMPLEMENTATION.</p> <p>Refer to Section B12 for sequence steps.</p>
<p>A7 BOUNDARIES OF THE ONE HUNDRED (100) YEAR FLOODPLAINS, FLOODWAY FRINGES, AND FLOODWAYS.</p> <p>Refer to Title Sheet, Sheet C001. The project is not located in a 100 Year Floodplain, Floodway Fringe, or Floodway as indicated on the Lake, IN, Flood Insurance Rate Map 18089C0126F dated January 28, 2023.</p>	<p>B13 PROVISIONS FOR EROSION AND SEDIMENT CONTROL ON INDIVIDUAL RESIDENTIAL BUILDING LOTS REGULATED UNDER THE PROPOSED PROJECT.</p> <p>Refer to the Erosion Control Details for the Sample Erosion/Sediment Control Practice Plan for a Typical One or Two-Family Dwelling Under Construction detail.</p>	<p>Major or Hazardous Spills - More than ten gallons, there is the potential for death, injury or illness to humans or animals, or has the potential for surface or groundwater pollution. <ul style="list-style-type: none"> Control or contain the spill without risking bodily harm. Temporarily plug storm drains if possible to prevent migration of the spill into the stormwater system. Immediately contact the local Fire Department at 911 to report any hazardous material spill. Contact supervisors and designated site inspectors immediately. Governing authorities responsible for storm water facilities should be contacted as well. The contractor is responsible for having these contact numbers available at the job site. A written report should be submitted to the owner as soon as possible. As soon as possible but within 2 hours of discovery, contact the local agency responsible for spill management. The following information should be noted for future reports to the agency: <ul style="list-style-type: none"> Name, address and phone number of person making the spill report The location of the spill The time of the spill Identification of the spilled substance Approximate quantity of the substance that has been spilled or may be further spilled The duration and source of the spill Name and location of the damaged waters Name of spill response organization What measures were taken to contain the spill response Other information that may be significant </p>	<p>C5 MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER QUALITY MEASURES.</p> <p>Maintenance requirements for the stormwater quality measures which will remain in place after construction is complete, are described below. Refer to the BMP Operations and Maintenance Manual for more detailed maintenance requirements.</p>
<p>A8 LAND USE OF ALL ADJACENT PROPERTIES.</p> <p>North: Memorial park East: Woods South: Residential West: Commercial</p>	<p>B14 MATERIAL HANDLING AND STORAGE PROCEDURES ASSOCIATED WITH CONSTRUCTION ACTIVITY.</p> <p>Solid Waste Disposal No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable construction activity, must be collected in containers and transported to approved closed dumpsters. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal.</p>	<p>Additional regulations or requirements may be present. A spill response professional should be consulted to make sure all appropriate and required steps have been taken. Contaminated solids should only be removed from the site after approval is given by the appropriate agency.</p>	<p>Vegetated Swales: The swales are to be graded in the Secondary Land Grading Activities after the downstream inlet and/or water quality measure is established, and temporarily stabilized as part of Surface Stabilization. Upon completion of site grading, Final Shaping/Landscaping should take place to ensure positive drainage/slope and adequate surface cover is established.</p>
<p>A9 IDENTIFICATION OF A U.S. EPA APPROVED OR ESTABLISHED TMDL.</p> <p>There are identified pollutants for this project's watershed per the available TMDL Reports. Little Calumet River - Col. TMDL</p>	<p>B15 MATERIAL HANDLING AND STORAGE PROCEDURES ASSOCIATED WITH CONSTRUCTION ACTIVITY.</p> <p>Dust Control/Off-Site Vehicle Tracking During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After construction, the site should be stabilized to reduce dust.</p>	<p>Sanitary/Sepptic Contractors and subcontractors must comply with all state and local sanitary sewer, portable toilet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. Sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities and the responsibility of the contractors and subcontractors. The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site location of said facilities.</p>	<p>Permanent Vegetation: The permanent vegetation is to be installed as part of the Final Shaping/Landscaping step to ensure positive drainage and adequate ground cover without disturbance from construction activities. Temporary vegetation should be maintained throughout preceding steps.</p>
<p>A10 NAME(S) OF THE RECEIVING WATER(S).</p> <p>Grand Calumet River-Little Calumet River is the receiving water of the project.</p>	<p>Construction Entrance Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking. Each contractor and subcontractor shall be responsible for maintaining the Construction Entrance and other controls as described in this SWP3.</p>	<p>Hazardous Material Storage & Waste Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer.</p>	<p>Infiltration Basin: Basins collect, temporarily hold, and gradually release excess storm water from storm events. Detention is achieved through the use of an outlet structure that regulates the rate of storm water outflow.</p>
<p>A11 IDENTIFICATION OF DISCHARGES TO A WATER ON THE CURRENT 303(D) LIST OF IMPAIRED WATERS AND THE POLLUTANT(S) FOR WHICH IT IS IMPAIRED.</p> <p>The receiving water of this project is on the current 303(d) List of Impaired Waters. The cities impairments are: Ammonia, Bacteria and Other Microbes, Degraded Aquatic Life, Nitrogen and/or Phosphorus, PCBs, Toxic Inorganic Chemicals</p>	<p>Material Storage Inspections Inspectors must evaluate areas used for storage of materials that are exposed to precipitation. The purpose is to ensure that materials are protected and/or impounded so that pollutants cannot discharge from storage areas. Off-site material storage areas used solely by the subject project are considered to be part of the project and must be included in the erosion control plans and the site inspection reports.</p>	<p>Water Sources Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.</p>	<p>Good Housekeeping Measures Good Housekeeping measures such as regular street sweeping, installation of trash receptacles, and reduction in fertilizer overspray can be incorporated by the owner and/or occupant.</p>
<p>A12 SOILS MAP OF THE PREDOMINANT SOIL TYPES.</p> <p>Refer to the Title Sheet, Sheet C001. The on-site soil will be treated as recommended by the geotechnical engineer if the conditions are unsuitable for the proposed construction. Remedial treatments may include, but are not limited to, removal of unsuitable soil and backfilling with engineered material, installation of a geofabric within or under the pavement system, or treatment of the subgrade with lime.</p>	<p>Soil Stabilization Inspections Seeded areas will be inspected to confirm that a healthy stand of vegetation is maintained. The site has achieved final stabilization once all areas are covered with pavement or have a stand of vegetation with at least 70% of the background vegetation density. The density of 70% or greater must be maintained to be considered as stabilized. The operator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.</p>	<p>Equipment Fueling and Storage Areas Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed area). Leaking equipment and maintenance fluids will be collected and not allowed to discharge onto soil where they may be washed away during a rain event.</p>	<p>Vegetated Swales: Vegetated swales require little maintenance if properly designed. Now as needed during the growing season; inspect for erosion problems twice during the first year, annually thereafter, and remove sediment, trash and debris annually or more frequently if needed.</p>
<p>A13 IDENTIFICATION AND LOCATION OF ALL KNOWN WETLANDS, LAKES, AND WATER COURSES ON OR ADJACENT TO THE PROJECT SITE (CONSTRUCTION PLAN, EXISTING SITE LAYOUT).</p> <p>Refer to the Existing Topography & Demolition Plan, Sheet C100. There are not wetlands, lakes, or water courses on or adjacent to this site.</p>	<p>Erosion and Sediment Control Inspections All controls should be inspected at least once every seven (7) calendar days and following any storm event of 0.5 inch or greater. The following is a list of inspection/maintenance practices that will be used for specific controls:</p>	<p>Concrete Washout All concrete trucks waste material shall be completely contained and disposed in accordance with all local, state, and federal regulations. A pit or container is required when cleaning concrete chutes.</p>	<p>Infiltration Basin: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A14 IDENTIFICATION OF ANY OTHER STATE OR FEDERAL WATER QUALITY PERMITS OR AUTHORIZATIONS THAT ARE REQUIRED FOR CONSTRUCTION ACTIVITIES.</p> <p>IDEM CSGP</p>	<p>Notice of Termination Compliance of the site with the CSGP remains the responsibility of all operators that have submitted a CSGP until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the CSGP terminates at midnight of the day the NOT is signed.</p>	<p>Equipment Washdown Equipment wash down (except for wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited.</p>	<p>Operator's Information: Name: City of Hammond Address: Hammond City Hall 5925 Calumet Avenue Hammond, IN 46320 Representative: Dean D. Button, PE (ButtonD@ghammond.com) Title: City Engineer Telephone: (219) 853-6336</p>
<p>A15 IDENTIFICATION AND DELINEATION OF EXISTING COVER INCLUDING NATURAL BUFFERS.</p> <p>None.</p>	<p>Modifications/Revisions to SWP3 Based on inspection results, any necessary modification to this SWP3 shall be implemented within seven calendar days of the inspection. A modification is necessary if a control measure or operational procedure does not provide adequate pollutant control. All revisions shall be recorded on a Record of Revisions within seven calendar days of the inspection.</p>	<p>It is the responsibility of the operator to maintain effective pollutant discharge controls. Physical site conditions or contractor/subcontractor practices could make it necessary to install more controls than were originally planned. For example, localized concentrations of surface runoff or unusually steep areas could require additional silt barrier or other structural controls. Assessing the need for and installing additional controls will be a continuing contractor/subcontractor responsibility until final stabilization is achieved, contractors and subcontractors implementing this SWP3 must remain alert to the need to periodically refine and update this SWP3 in order to accomplish the intended goals.</p>	<p>Operator's Information (Trained Individual): Name: City of Hammond Address: Hammond City Hall 5925 Calumet Avenue Hammond, IN 46320 Representative: Dean D. Button, PE (ButtonD@ghammond.com) Title: City Engineer Telephone: (219) 853-6336</p>
<p>A16 EXISTING SITE TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS.</p> <p>Refer to the Existing Topography & Demolition Plan C100.</p>	<p>Inspection Reports Inspection reports shall be completed including scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, observations relating to the implementation of the SWP3, and any actions taken as a result of incidents of noncompliance noted during the inspection. The inspection report should state whether the site was in compliance or identify any incidents of noncompliance. The contractor shall keep a copy of the inspection reports on site and permanently for a period of two years following construction. The on-site reports may be requested by inspections conducted by the local governing authority.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A17 LOCATION(S) WHERE RUN-OFF ENTERS THE PROJECT SITE.</p> <p>Refer to the Existing Topography & Demolition Plan, C100. Offsite stormwater sheet flow onto the site from the north. The area east of the site is higher in grade, but flat, which does not allow stormwater to flow onto the proposed site.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A18 LOCATION(S) WHERE RUN-OFF DISCHARGES FROM THE PROJECT SITE PRIOR TO LAND DISTURBANCE.</p> <p>Refer to the Existing Topography & Demolition Plan, Sheet C100. The project's stormwater discharges from the site via infiltration as well as a pipe connection to the existing storm sewer in Highland Street.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A19 LOCATION OF ALL EXISTING STRUCTURES ON THE PROJECT SITE.</p> <p>Refer to the Existing Topography & Demolition Plan, Sheet C100. There are existing buildings, ponds, or other infrastructure on the project site.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A20 EXISTING PERMANENT RETENTION OR DETENTION FACILITIES, INCLUDING MANMADE WETLANDS, DESIGNED FOR THE PURPOSE OF STORMWATER MANAGEMENT.</p> <p>There are no existing permanent retention or detention facilities.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A21 LOCATIONS WHERE STORMWATER MAY BE DIRECTLY DISCHARGED INTO GROUNDWATER, SUCH AS ABANDONED WELLS, SINKHOLES, OR KARST FEATURES.</p> <p>There are not locations where stormwater may be directly discharged into groundwater.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A22 SIZE OF THE PROJECT AREA EXPRESSED IN ACRES.</p> <p>Refer to the Existing Topography & Demolition Plan, Sheet C100. The project area is 214.37 acres.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A23 TOTAL EXPECTED LAND DISTURBANCE EXPRESSED IN ACRES.</p> <p>Refer to the Development Plan, Sheet C200. The disturbed area is 214.38 acres.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A24 PROPOSED FINAL TOPOGRAPHY.</p> <p>Refer to the Development Plan, Sheet C200 for the proposed grading of the project.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A25 LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS.</p> <p>Refer to the Erosion Control Plan, Sheet C500 for construction limits.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A26 LOCATIONS, SIZE, AND DIMENSIONS OF ALL STORMWATER DRAINAGE SYSTEM SUCH AS CULVERTS, STORMWATER SEWER, AND CONVEYANCE CHANNELS.</p> <p>Refer to the Development Plan, Sheet C200 for location and Storm Sewer Plan & Profiles, Sheets C400-C405 for size and dimensions.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>
<p>A27 LOCATIONS OF SPECIFIC POINTS WHERE STORMWATER AND NON-STORMWATER DISCHARGES WILL LEAVE THE PROJECT SITE.</p> <p>Refer to the Development Plan, Sheet C200 for where stormwater discharges from the site. The discharge points for this site are located at the southeast corner of the site with a proposed connection to the existing Highland Street storm sewer as well as infiltration.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Final Stabilization Final stabilization has been achieved on all portions of the site for which the permittee was responsible.</p>	<p>Vegetated Swales: Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control blanket and/or seed as necessary.</p>



SPECIFICATIONS

LOCATION

- AVOID LOCATING ON STEEP SLOPES OR AT CURVES IN PUBLIC ROADS.

DIMENSIONS

- WIDTH: TWENTY (20) FEET MINIMUM OR FULL WIDTH OF ENTRANCE/EXIT ROADWAY, WHICHEVER IS GREATER.
- LENGTH: ONE-HUNDRED FIFTY (150) FEET MINIMUM (LENGTH CAN BE SHORTER FOR SMALLER SITES).
- THICKNESS: EIGHT (8) INCHES MINIMUM.

MATERIALS

- ONE (1) TO TWO AND ONE-HALF (2-1/2) INCH DIAMETER WASHED AGGREGATE (INDOT CA NO. 2).
- ONE-HALF (1/2) TO ONE AND ONE-HALF (1-1/2) INCH WASHED AGGREGATE (INDOT CA NO. 53); OPTIONAL, USED PRIMARILY WHERE THE PURPOSE OF THE PAD IS TO KEEP SOIL FROM ADHERING TO VEHICLE TIRES.
- GEOTEXTILE FABRIC UNDERLAYER (USED AS A SEPARATE LAYER TO PREVENT INTERMIXING OF AGGREGATE AND THE UNDERLYING SOIL MATERIAL AND TO PROVIDE GREATER BEARING STRENGTH WHEN ENCOUNTERING WET CONDITIONS OR SOILS WITH SEASONAL HIGH WATER TABLE LIMITATIONS).

INSTALLATION

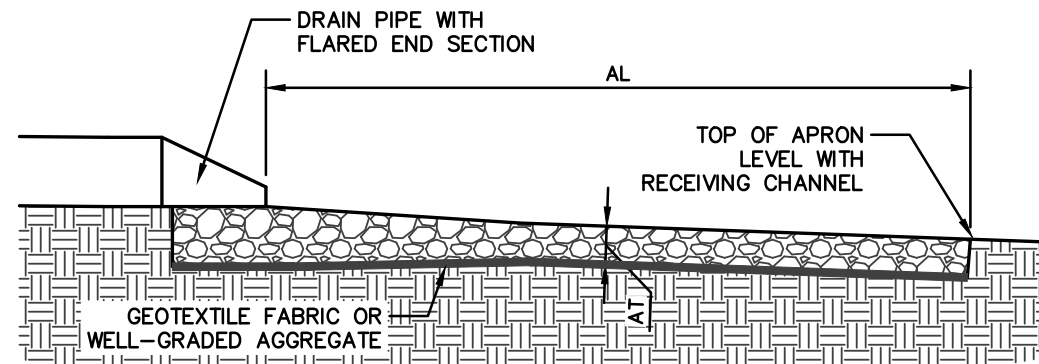
1. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
2. GRADE FOUNDATION AND GROWN FOR POSITIVE DRAINAGE. IF THE SLOPE OF THE CONSTRUCTION ENTRANCE IS TOWARD A PUBLIC ROAD AND EXCEEDS TWO (2) PERCENT, CONSTRUCT AN EIGHT (8) INCH HIGH DIVERSION RIDGE WITH A RATIO OF 3-TO-1 SIDE SLOPES ACROSS THE FOUNDATION AREA ABOUT 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE ROAD (SEE CROSS-SECTION VIEW ABOVE).
3. INSTALL A CULVERT PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.
4. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.
5. PLACE AGGREGATE (INDOT CA NO. 2) TO THE DIMENSIONS AND GRADE SHOWN IN THE CONSTRUCTION PLANS, LEAVING THE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. WHERE POSSIBLE, DIVERT ALL STORM WATER RUNOFF AND DRAINAGE FROM THE TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD TO A SEDIMENT TRAP OR BASIN.

MAINTENANCE

- INSPECT DAILY.
- RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
- TOP-DRESS WITH CLEAN AGGREGATE AS NEEDED.
- IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS.
- FLUSHING SHOULD ONLY BE USED IF THE WATER FROM THE CONSTRUCTION DRIVE CAN BE CONVEYED INTO A SEDIMENT TRAP OR BASIN.

GRAVEL CONSTRUCTION ENTRANCE (SITES LARGER THAN TWO ACRES)

NOT TO SCALE (REV. 01/17)



AL = APRON LENGTH (FEET)
 AW = APRON WIDTH (FEET)
 AT = APRON THICKNESS (FEET) = 3X MEDIAN RIPRAP DIAMETER
 NOTE: AW IS THE APRON WIDTH AT THE NARROW END OF THE APRON.

SPECIFICATIONS

CAPACITY

- PEAK RUNOFF FROM A 10-YEAR FREQUENCY, 24-HOUR STORM EVENT OR THE DESIGN DISCHARGE OF THE WATER CONVEYANCE STRUCTURE, WHICHEVER IS GREATER.

MAXIMUM VELOCITY

- TEN FEET PER SECOND.

APRON

- ALIGNED STRAIGHT WITH CHANNEL FLOW. IF A CURVE IS NECESSARY TO ALIGN THE APRON WITH THE RECEIVING STREAM, LOCATE THE CURVE IN THE UPSTREAM SECTION OF THE APRON.
- THICKNESS:
 - ** 1.2 TIMES THE MAXIMUM STONE DIAMETER FOR A d_{50} STONE SIZE OF 15 INCHES OR LARGER.
 - ** 1.5 TIMES THE MAXIMUM STONE DIAMETER FOR A d_{50} STONE SIZE OF 10 INCHES OR LESS.

TABLE 1. SIZING FOR FLOW DISSIPATORS AT CULVERT PIPE OUTLETS

PIPE SIZE	MEDIAN RIPRAP DIAMETER	APRON WIDTH**	APRON LENGTH**
8 IN.	6 IN. MIN.	2 TO 3 FT.	5 TO 7 FT.
12 IN.	6 IN. MIN.	3 TO 4 FT.	6 TO 10 FT.
15 IN.	6 IN. MIN.	4 TO 6 FT.	6 TO 12 FT.
18 IN.	6 IN. MIN.	4 TO 6 FT.	8 TO 16 FT.
21 IN.	6 IN. MIN.	6 TO 8 FT.	8 TO 16 FT.
24 IN.	9 IN. MIN.	6 TO 8 FT.	12 TO 18 FT.
30 IN.	9 IN. MIN.	8 TO 10 FT.	14 TO 20 FT.
36 IN.	9 IN. MIN.	10 TO 12 FT.	16 TO 22 FT.
42 IN.	9 IN. MIN.	12 TO 14 FT.	18 TO 24 FT.
48 IN.	12 IN. MIN.	12 TO 14 FT.	18 TO 26 FT.
54 IN.	12 IN. MIN.	14 TO 16 FT.	22 TO 28 FT.
60 IN.	12 IN. MIN.	15 TO 17 FT.	22 TO 32 FT.
66 IN.	12 IN. MIN.	17 TO 19 FT.	24 TO 36 FT.
72 IN.	12 IN. MIN.	18 TO 20 FT.	26 TO 40 FT.
84 IN.	18 IN. MIN.	21 TO 23 FT.	30 TO 44 FT.

*APRON WIDTH AT THE NARROW END OF APRON (PIPE OR CHANNEL OUTLET).
 **SELECT LENGTH TAKING INTO CONSIDERATION THE LOW FLOW (NO PRESSURE HEAD) OR HIGH FLOW (PRESSURE HEAD) CONDITIONS OF THE CULVERT PIPE.

RIPRAP OUTLET PROTECTION

NOT TO SCALE

SPECIFICATIONS

DRAINAGE AREA

- LIMITED TO ONE-QUARTER ACRE PER 100 LINEAR FEET OF FENCE.
- FURTHER RESTRICTED BY SLOPE STEEPNESS (SEE TABLE 1).

EFFECTIVE LIFE

- SIX MONTHS (MAXIMUM).

LOCATION

- INSTALLED PARALLEL TO THE SLOPE CONTOUR.
- MINIMUM OF 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A BROAD, SHALLOW SEDIMENT POOL.
- ACCESSIBLE FOR MAINTENANCE (REMOVAL OF SEDIMENT AND SILT FENCE REPAIR).

SPACING

PERCENT SLOPE	MAXIMUM DISTANCE
< 2%	< 50:1 100 FEET
2% - 5%	50:1 TO 20:1 75 FEET
5% - 10%	20:1 TO 10:1 50 FEET
10% - 20%	10:1 TO 5:1 25 FEET
> 20%	> 5:1 15 FEET

***CONSIDER OTHER ALTERNATIVES:**

NOTE: MULTIPLE ROWS OF SILT FENCE ARE NOT RECOMMENDED ON THE SAME SLOPE.

TRENCH

- DEPTH: EIGHT INCHES MINIMUM.
- WIDTH: FOUR INCHES MINIMUM.
- AFTER INSTALLING THE FENCE, BACKFILL WITH SOIL MATERIAL AND COMPACT (TO BURY AND ANCHOR THE LOWER PORTION OF THE FENCE FABRIC).

NOTE: AN ALTERNATIVE TO TRENCHING IS TO USE MECHANICAL EQUIPMENT TO FLOW IN THE SILT FENCE.

MATERIALS AND SILT FENCE SPECIFICATIONS

- FABRIC: WOVEN OR NON-WOVEN GEOTEXTILE FABRIC, MEETING SPECIFIED MINIMUMS OUTLINED IN TABLE 2.

TABLE 2. GEOTEXTILE FABRIC SPECIFICATIONS FOR SILT FENCE (MINIMUM)

PHYSICAL PROPERTY	WOVEN GEOTEXTILE FABRIC	NON-WOVEN GEOTEXTILE FABRIC
FILTERING EFFICIENCY AT 20% ELONGATION	85%	85%
TEXTILE STRENGTH		
STANDARD STRENGTH	30 LBS. PER LINEAL INCH	50 LBS. PER LINEAL INCH
EXTRA STRENGTH	50 LBS. PER LINEAL INCH	70 LBS. PER LINEAL INCH
SLURRY FLOW RATE	0.3 GAL./MIN./SQUARE FOOT	4.5 GAL./MIN./SQUARE FOOT
WATER FLOW RATE	15 GAL./MIN./SQUARE FOOT	220 GAL./MIN./SQUARE FOOT
UV RESISTANCE	70%	85%
POST SPACING	7 FEET	5 FEET

NOTE: SILT FENCES CAN BE PURCHASED COMMERCIALY.

- HEIGHT - A MINIMUM OF 18 INCHES ABOVE GROUND LEVEL (30 INCHES MAXIMUM).
- REINFORCEMENT - FABRIC SECURELY FASTENED TO POSTS WITH WOOD LATHE.
- SUPPORT POSTS - 2x2 INCH HARDWOOD POSTS. STEEL FENCE POSTS MAY BE SUBSTITUTED FOR HARDWOOD POSTS (STEEL POSTS SHOULD HAVE PROJECTIONS FOR FASTENING FABRIC).
- SPACING - EIGHT FEET MAXIMUM IF FENCE IS SUPPORTED BY WIRE MESH FENCING, SIX FEET MAXIMUM FOR EXTRA-STRENGTH FABRIC WITHOUT WIRE BACKING.

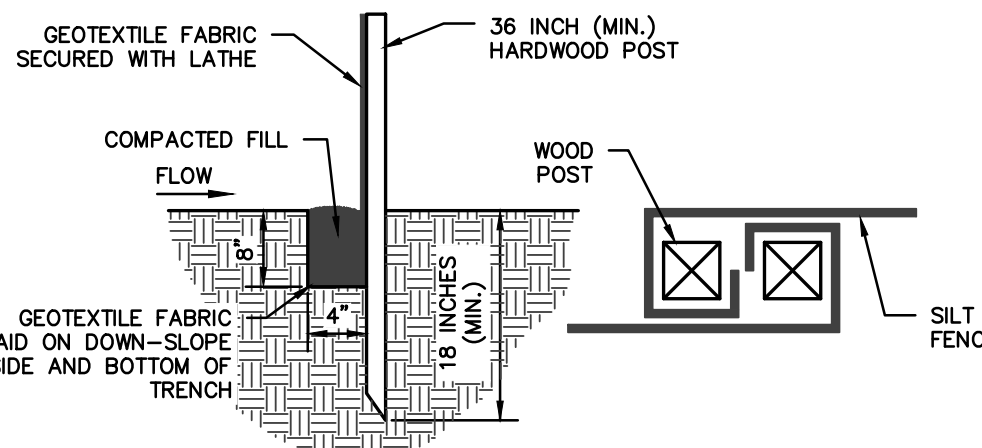
INSTALLATION

1. LAY OUT THE LOCATION OF THE FENCE SO THAT IS PARALLEL TO THE CONTOUR OF THE SLOPE AND AT LEAST 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A SEDIMENT STORAGE AREA. TURN THE ENDS OF THE FENCE UP SLOPE SUCH THAT THE POINT OF CONTACT BETWEEN THE GROUND AND THE BOTTOM OF THE FENCE END TERMINATES AT A HIGHER ELEVATION THAN THE TOP OF THE FENCE AT ITS LOWEST POINT.
2. EXCAVATE AN EIGHT-INCH DEEP BY FOUR-INCH WIDE TRENCH ALONG THE ENTIRE LENGTH OF THE FENCE LINE. INSTALLATION BY FLOWING IS ALSO ACCEPTABLE.
3. INSTALL THE SILT FENCE WITH THE FILTER FABRIC LOCATED ON THE UP-SLOPE SIDE OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN-SLOPE SIDE OF THE TRENCH.
4. DRIVE THE SUPPORT POSTS AT LEAST 18 INCHES INTO THE GROUND, TIGHTLY STRETCHING THE FABRIC BETWEEN THE POSTS AS EACH IS DRIVEN INTO THE SOIL. A MINIMUM OF 12 INCHES OF THE FILTER FABRIC SHOULD EXTEND INTO THE TRENCH. IF IT IS NECESSARY TO JOIN THE ENDS OF TWO FENCES, USE THE JOINT METHOD SHOWN.
5. LAY THE FOUR INCHES OF FILTER FABRIC ON THE BOTTOM OF THE TRENCH AND EXTEND IT TOWARD THE UP-SLOPE SIDE OF THE TRENCH.
6. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE.

NOTE: IF THE SILT FENCE IS BEING CONSTRUCTED ON-SITE, ATTACH THE FILTER FABRIC TO THE SUPPORT POSTS (REFER TO TABLES 1 AND 2 FOR SPACING AND GEOTEXTILE SPECIFICATIONS) AND ATTACH WOODEN LATHE TO SECURE THE FABRIC TO THE POSTS. ALLOW FOR AT LEAST 12 INCHES OF FABRIC BELOW GROUND LEVEL. COMPLETE THE SILT FENCE INSTALLATION, FOLLOWING STEPS 1 THROUGH 6 ABOVE.

MAINTENANCE

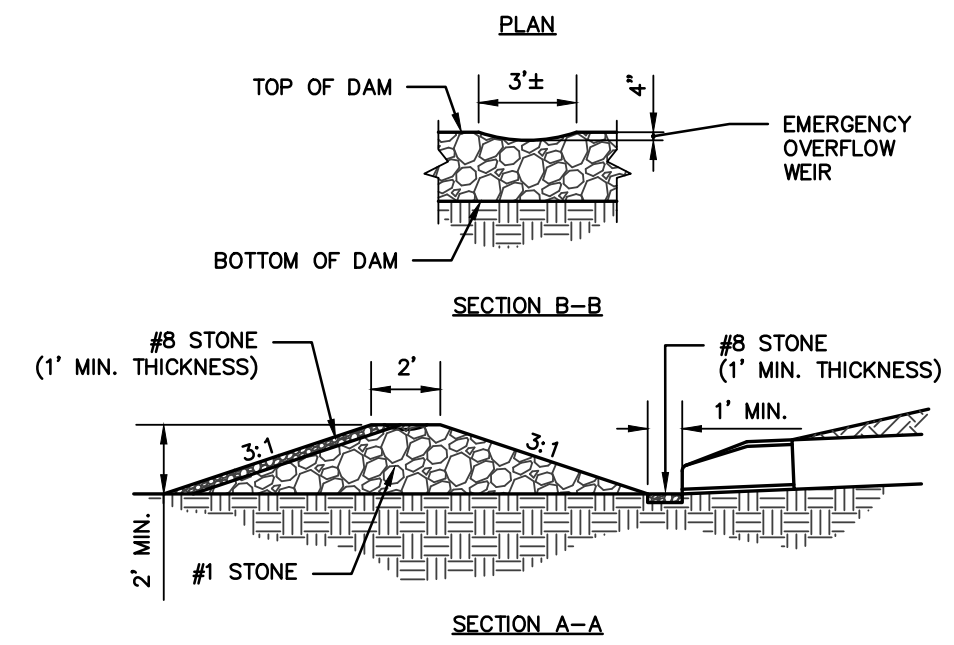
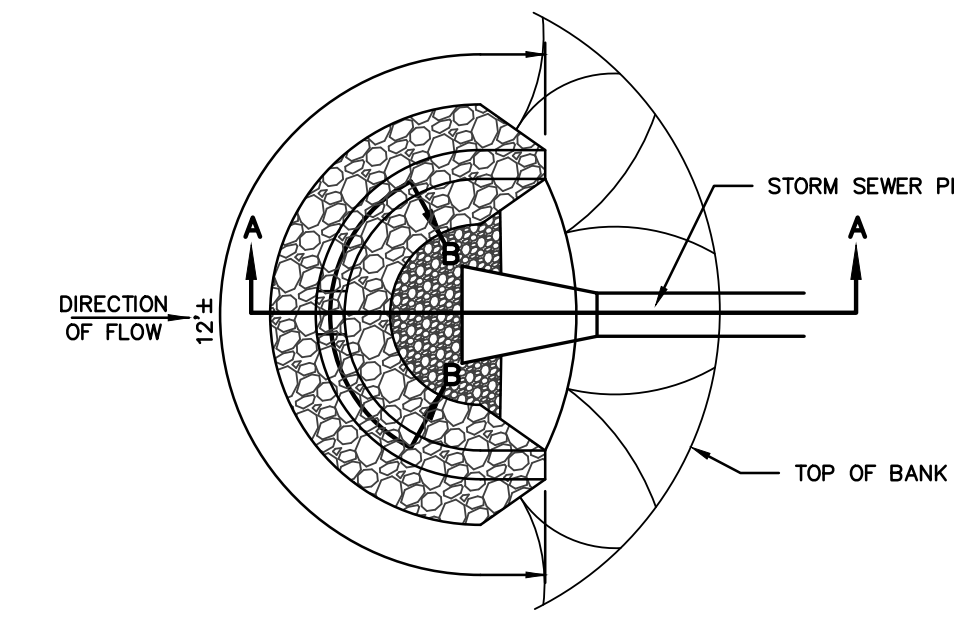
- INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.
- REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE FILTER FABRIC TO BULGE OR WHEN IT REACHES ON-HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.



NOTE: SILT FENCE IS NOT RECOMMENDED FOR USE AS A DIVERSION AND SHOULD NOT BE USED ACROSS A STREAM, CHANNEL, DITCH, SWALE, OR ANYWHERE THAT CONCENTRATED FLOW IS ANTICIPATED.

SILT FENCE CONSTRUCTION

NOT TO SCALE (REV. 01/17)



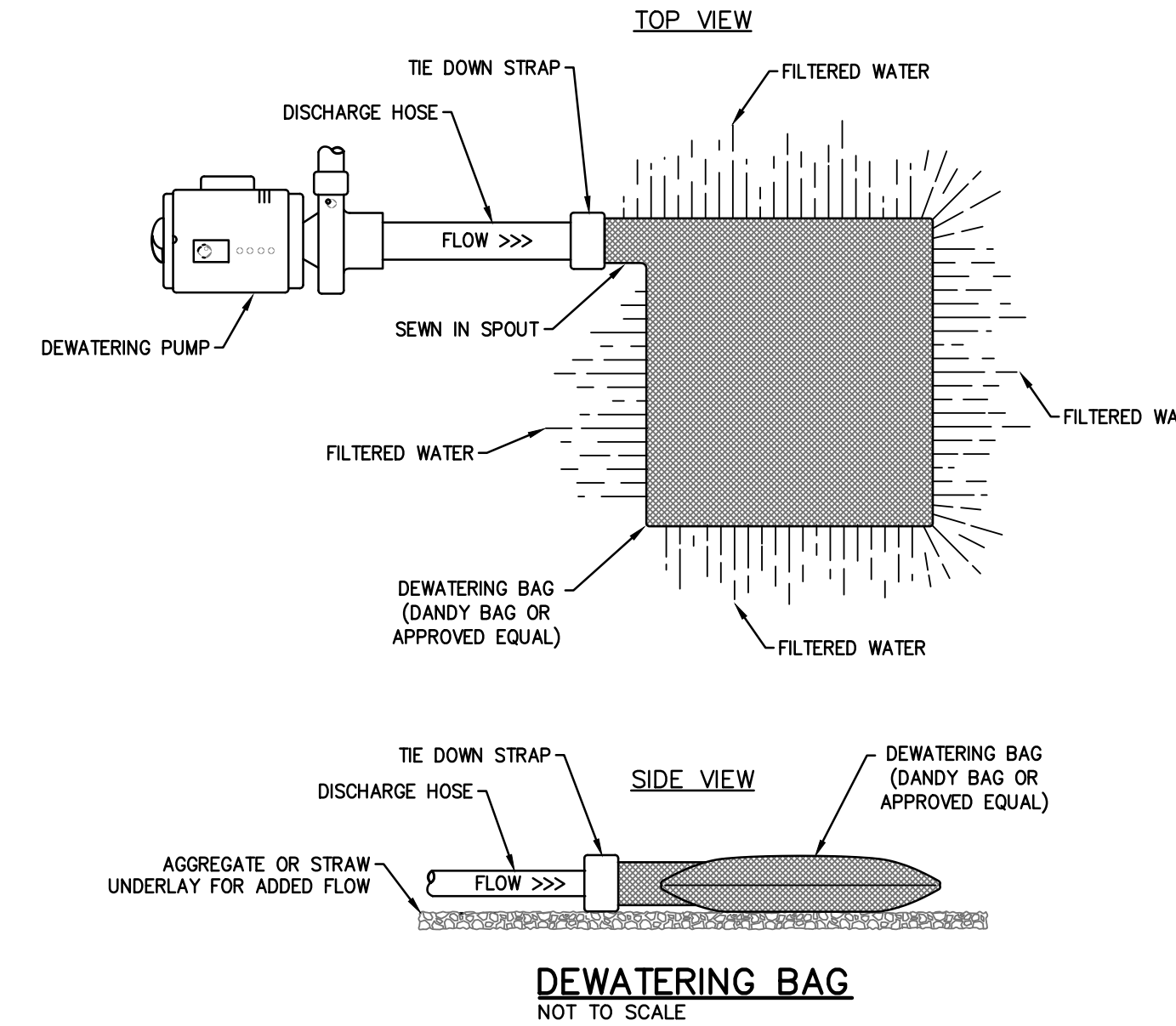
MAINTENANCE

- INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE AND PROPERLY DISPOSE OF ANY UNSTABLE SEDIMENT AND CONSTRUCTION MATERIAL, AND RE-STABILIZE.

ROCK DONUT DETAIL

NOT TO SCALE (REV. 01/17)

- INSTALLATION**
1. PLACE LIFTING STRAPS UNDER THE UNIT TO FACILITATE REMOVAL AFTER USE.
 2. UNFOLD DANDY DEWATERING BAG (OR APPROVED EQUAL) ON STABILIZED AREA OVER DENSE VEGETATION, STRAW, OR GRAVEL.
 3. INSERT DISCHARGE HOSE FROM PUMP INTO DANDY DEWATERING BAG (OR APPROVED EQUAL) A MINIMUM OF SIX INCHES AND TIGHTLY SECURE WITH ATTACHED STRAP TO PREVENT WATER FROM FLOWING OUT OF THE UNIT WITHOUT BEING FILTERED. IF USING OPTIONAL ABSORBENTS, PLACE ABSORBENT PILLOW INTO THE DANDY DEWATERING BAG (OR APPROVED EQUAL).
- MAINTENANCE**
1. REPLACE THE UNIT WHEN 1/2 FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL RATE. IF USING OPTIONAL ABSORBENTS, REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.
 2. REMOVE AND DISPOSE OF THE SEDIMENT IN A MANNER SATISFACTORY TO THE INSPECTOR OR MOVE THE UNIT AND SEDIMENT FROM THE ENVIRONMENTALLY SENSITIVE AREA TO AN APPROVED DISPOSAL SITE. SLIT THE UNIT, REMOVE THE SEDIMENT, GRADE SMOOTHLY INTO THE EXISTING TOPOGRAPHY AND SEED. DISPOSE OF UNIT NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.



DEWATERING BAG

NOT TO SCALE



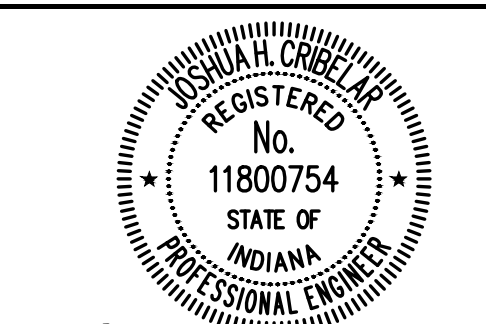
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Joshua H. Cristler
 CERTIFIED BY

ISSUANCE INDEX

DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

EROSION CONTROL DETAILS

C520

DRAWING FILE: W:\hwy\hwy\2021\03290\03290.Dwg; Drawing: Civil\Construction Documents\Construction Documents\03290.CE.C500.EC00.dwg; PLOT DATE: 12/05/2024 4:39 PM; EDIT DATE: 10/16/2024; EDIT SCALE: 1:1; EDITED BY: AWALUSLEY

SEEDING SPECIFICATIONS

SEEDBED PREPARATION

- GRADE AND APPLY SOIL AMENDMENTS.

SEEDING FREQUENCY

- SEED ROUGH GRADED AREAS DAILY WHILE SOIL IS STILL LOOSE AND MOIST.

DENSITY OF VEGETATIVE COVER

- EIGHTY PERCENT OR GREATER OVER THE SOIL SURFACE.

MATERIALS

- SOIL AMENDMENTS - SELECT MATERIALS AND RATES AS DETERMINED BY A SOIL TEST (CONTACT YOUR COUNTY SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE AND SOIL INFORMATION, INCLUDING AVAILABLE SOIL TESTING SERVICES) OR 400 TO 600 POUNDS OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT. CONSIDER THE USE OF REDUCED PHOSPHOROUS APPLICATION WHERE SOIL TESTS INDICATE ADEQUATE PHOSPHOROUS LEVELS IN THE SOIL PROFILE.
- SEED - SELECT APPROPRIATE PLANT SPECIES SEED OR SEED MIXTURES ON THE BASIS OF QUICK GERMINATION, GROWTH, AND TIME OF YEAR TO BE SEED (SEE TABLE 1).
- MULCH - STRAW, HAY, WOOD FIBER, ETC. (TO PROTECT SEEDBED, RETAIN MOISTURE, AND ENCOURAGE PLANT GROWTH), ANCHORED TO PREVENT REMOVAL BY WIND OR WATER OR COVERED WITH MANUFACTURED EROSION CONTROL BLANKETS.

TABLE 1. SLOPE STEEPNESS RESTRICTIONS

SEED SPECIES*	RATE PER ACRE	PLANTING DEPTH	OPTIMUM DATES**
WHEAT OR RYE	150 LBS.	1 TO 1-1/2 INCHES	SEPT. 15-OCT. 30
SPRING OATS	100 LBS.	1 INCH	MARCH 1-APRIL 15
ANNUAL RYEGRASS	40 LBS.	1/4 INCH	MARCH 1-MAY 1
GERMAN MILLET	40 LBS.	1 TO 2 INCHES	MAY 1-JUNE 1
SUDANGRASS	35 LBS.	1 TO 2 INCHES	MAY 1-JULY 30
BUCKWHEAT	60 LBS.	1 TO 2 INCHES	APRIL 15-JUNE 1
CORN (BROADCAST)	300 LBS.	1 TO 2 INCHES	MAY 11-AUG. 10
SORGHUM	35 LBS.	1 TO 2 INCHES	MAY 1-JULY 15

*PERENNIAL SPECIES MAY BE USED AS A TEMPORARY COVER, ESPECIALLY IF THE AREA TO BE SEED WILL REMAIN IDLE FOR MORE THAN ONE YEAR.
**SEEDING DONE OUTSIDE THE OPTIMUM SEEDING DATES INCREASES THE CHANCES OF SEEDING FAILURE. DATES MAY BE EXTENDED OR SHORTENED BASED ON THE LOCATION OF THE PROJECT WITHIN THE STATE.

NOTES:

- MULCH ALONE IS AN ACCEPTABLE TEMPORARY COVER AND MAY BE USED IN LIEU OF TEMPORARY SEEDING, PROVIDED THAT IT IS APPROPRIATELY ANCHORED.

- A HIGH POTENTIAL FOR FERTILIZER, SEED, AND MULCH TO WASH EXISTS ON STEEP BANKS, CUTS, AND IN CHANNELS AND AREAS OF CONCENTRATED FLOW.

SEEDING APPLICATION

- TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS.
- APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.
- WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF THE SOIL WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE.

SEEDING

- SELECT A SEED SPECIES OR AN APPROPRIATE SEED MIXTURE AND APPLICATION RATE FROM TABLE 1.
- APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER SEEDER OR BY BROADCASTING. PLANT OR COVER SEED TO THE DEPTH SHOWN IN TABLE 1.

NOTES:

- IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL CONTACT BY FIRING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER COMPLETING SEED OPERATIONS.
- DAILY SEEDING WHEN THE SOIL IS MOIST IS USUALLY MOST EFFECTIVE.
- IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.

SEEDING MAINTENANCE

- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- CHECK FOR EROSION OR MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
- MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80 PERCENT DENSITY); RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
- IF NITROGEN DEFICIENCY IS APPARENT, TOP-DRESS FALL SEEDING WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

MULCH SPECIFICATIONS

MATERIALS

TABLE 1. SLOPE STEEPNESS RESTRICTIONS

MATERIAL*	RATE PER ACRE	COMMENTS
STRAW OR HAY	2 TONS	SHOULD BE DRY, FREE OF UNDESIRABLE SEEDS. SPREAD BY HAND OR MACHINE. MUST BE CRIMPED OR ANCHORED (SEE TABLE 2).
WOOD FIBER OR CELLULOSE	1 TON	MULCHING IS NOT RECOMMENDED IN CONCENTRATED FLOWS. CONSIDER EROSION CONTROL BLANKETS OR OTHER STABILIZATION METHODS.

*MULCHING IS NOT RECOMMENDED IN CONCENTRATED FLOWS. CONSIDER EROSION CONTROL BLANKETS OR OTHER STABILIZATION METHODS.

COVERAGE

- THE MULCH SHOULD HAVE A UNIFORM DENSITY OF AT LEAST 75 PERCENT OVER THE SOIL SURFACE.

ANCHORING

TABLE 2. MULCH ANCHORING METHODS

ANCHORING METHOD*	HOW TO APPLY
MULCH ANCHORING TOOL OR FARM DISK (DULL, SERRATED, AND BLADES SET STRAIGHT)	CRIMP OR PUNCH THE STRAW OR HAY TWO TO FOUR INCHES INTO THE SOIL. OPERATE MACHINERY ON THE CONTOUR OF THE SLOPE.
CLEATING WITH DOZER TRACKS	OPERATE DOZER UP AND DOWN SLOPE TO PREVENT FORMATION OF RILLS BY DOZER CLEATS.
WOOD HYDROMULCH FIBERS	APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
SYNTHETIC TACKIFIERS, BINDERS, OR SOIL STABILIZERS	APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
NETTING (SYNTHETIC OR BIODEGRADABLE MATERIAL)	INSTALL NETTING IMMEDIATELY AFTER APPLYING MULCH. ANCHOR NETTING WITH STAPLES. EDGES OF NETTING STRIPS SHOULD OVERLAP WITH EACH UP-SLOPE STRIP OVERLAPPING FOUR TO SIX INCHES OVER THE ADJACENT DOWN-SLOPE STRIP. BEST SUITED TO SLOPE APPLICATIONS. IN MOST INSTANCES, INSTALLATION DETAILS ARE SITE SPECIFIC, SO MANUFACTURER'S RECOMMENDATIONS SHOULD BE FOLLOWED.

*ALL FORMS OF MULCH MUST BE ANCHORED TO PREVENT DISPLACEMENT BY WIND AND/OR WATER.

MULCH APPLICATION

- APPLY MULCH AT THE RECOMMENDED RATE SHOWN IN TABLE 1.
- SPREAD THE MULCH MATERIAL UNIFORMLY BY HAND, HAYFORK, MULCH BLOWER, OR HYDRAULIC MULCH MACHINE. AFTER SPREADING, NO MORE THAN 25 PERCENT OF THE GROUND SHOULD BE VISIBLE.
- ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION. THE MULCH CAN BE ANCHORED USING ONE OF THE METHODS LISTED BELOW.
 - CRIMP WITH A MULCH ANCHORING TOOL, A WEIGHTED FARM DISK WITH DULL SERRATED BLADES SET STRAIGHT, OR TRACK CLEATS OF A BULLDOZER.
 - APPLY HYDRAULIC MULCH WITH SHORT CELLULOSE FIBERS.
 - APPLY A LIQUID TACKIFIER, OR
 - COVER WITH NETTING SECURED BY STAPLES.

MULCH MAINTENANCE

- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- CHECK FOR EROSION OR MOVEMENT OF MULCH; REPAIR DAMAGED AREAS, RESEED, APPLY NEW MULCH AND ANCHOR THE MULCH IN PLACE.
- CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.
- IF EROSION IS SEVERE OR RECURRING, USE EROSION CONTROL BLANKETS OR OTHER MORE SUBSTANTIAL STABILIZATION METHODS TO PROTECT THE AREA.

TEMPORARY SEEDING WITH MULCH

NOT TO SCALE

(REV. 01/17)

TABLE 1. PERMANENT SEEDING RECOMMENDATIONS

THIS TABLE PROVIDES SEVERAL SEED MIXTURE OPTIONS. ADDITIONAL SEED MIXTURES ARE AVAILABLE COMMERCIALY. WHEN SELECTING A MIXTURE, CONSIDER INTENDED LAND USE AND SITE CONDITIONS, INCLUDING SOIL PROPERTIES (E.G., SOIL PH AND DRAINAGE), SLOPE ASPECT, AND THE TOLERANCE OF EACH SPECIES TO SHADE AND DROUGHT.

OPEN LOW-MAINTENANCE AREAS (REMAINING IDLE MORE THAN SIX MONTHS)

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. PERENNIAL RYEGRASS WHITE CLOVER**	70 LBS. 2 LBS.	5.6 TO 7.0
2. PERENNIAL RYEGRASS TALL FESCUE**	70 LBS. 50 LBS.	5.6 TO 7.0
3. TALL FESCUE** WHITE CLOVER**	70 LBS. 2 LBS.	5.5 TO 7.5

STEEP BANKS AND CUTS, LOW-MAINTENANCE AREAS (NOT MOWED)

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. SMOOTH BROME GRASS RED CLOVER**	35 LBS. 20 LBS.	5.5 TO 7.0
2. TALL FESCUE** WHITE CLOVER**	50 LBS. 2 LBS.	5.5 TO 7.5
3. TALL FESCUE** RED CLOVER**	50 LBS. 20 LBS.	5.5 TO 7.5
4. ORCHARD GRASS RED CLOVER**	30 LBS. 20 LBS.	5.6 TO 7.0
5. CROWNVEITCH** TALL FESCUE**	12 LBS. 30 LBS.	5.6 TO 7.0

LAWNS AND HIGH-MAINTENANCE AREAS

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. BLUEGRASS	140 LBS.	5.5 TO 7.0
2. PERENNIAL RYEGRASS (TURF TYPE)	60 LBS.	5.6 TO 7.0
3. TALL FESCUE (TURF TYPE)** BLUEGRASS	170 LBS. 30 LBS.	5.6 TO 7.5

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. PERENNIAL RYEGRASS WHITE**	150 LBS. 2 LBS.	5.5 TO 7.0
2. KENTUCKY BLUEGRASS SMOOTH BROMEGRASS SWITCHGRASS	20 LBS. 10 LBS. 3 LBS.	5.5 TO 7.5
3. TALL FESCUE** WHITE CLOVER**	150 LBS. 2 LBS.	5.5 TO 7.5
4. TALL FESCUE** PERENNIAL RYEGRASS KENTUCKY BLUEGRASS	150 LBS. 20 LBS. 20 LBS.	5.5 TO 7.5

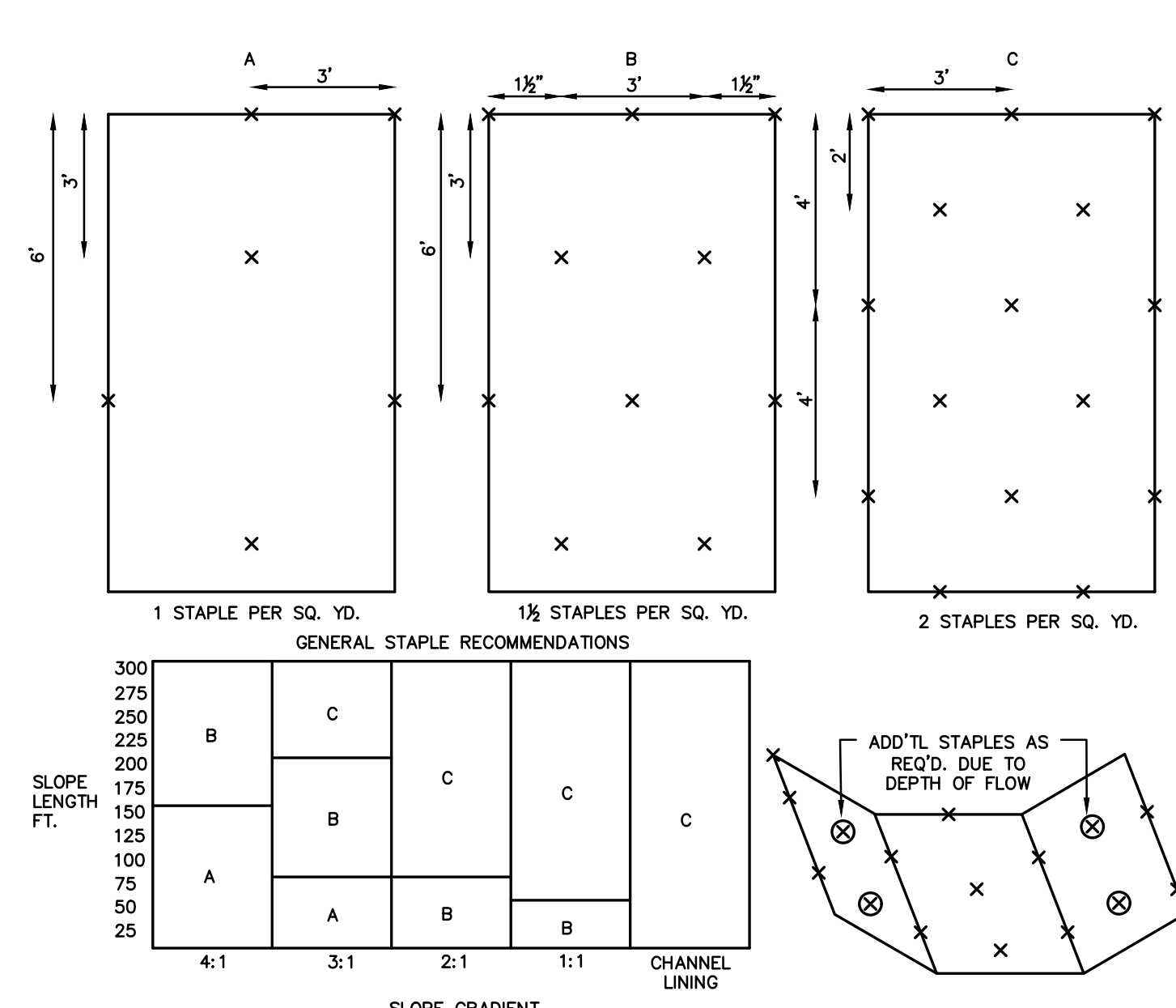
*FOR BEST RESULTS: (A) LEGUME SEED SHOULD BE INOCULATED; (B) SEEDING MIXTURES CONTAINING LEGUMES SHOULD PREFERABLY BE SPRING-SEEDED, ALTHOUGH THE GRASS MAY BE FALL-SEEDED AND THE LEGUME FROST-SEEDED; AND (C) IF LEGUMES ARE FALL-SEEDED, DO SO IN EARLY FALL.

**TALL FESCUE PROVIDES LITTLE COVER FOR, AND MAY BE TOXIC TO SOME SPECIES OF WILDLIFE. THE INDIANA DEPARTMENT OF NATURAL RESOURCES RECOGNIZES THE NEED FOR ADDITIONAL RESEARCH ON ALTERNATIVES SUCH AS BUFFALOGRASS, ORCHARDGRASS, SMOOTH BROMEGRASS, AND SWITCHGRASS. THIS RESEARCH, IN CONJUNCTION WITH DEMONSTRATION AREAS, SHOULD FOCUS ON EROSION CONTROL CHARACTERISTICS, WILDLIFE TOXICITY, TURF DISABILITY, AND DROUGHT RESISTANCE.

PERMANENT SEEDING WITH MULCH

NOT TO SCALE

(REV. 01/17)



EROSION CONTROL BLANKET

NOT TO SCALE

(REV. 01/17)

SPECIFICATIONS

- EFFECTIVE LIFE: THE FUNCTIONAL LIFE OF AN EROSION CONTROL BLANKET IS DEPENDENT ON THE MATERIALS USED.

ANCHORING

- STAPLES, PINS OR STAKES USED TO PREVENT MOVEMENT OR DISPLACEMENT OF BLANKET. (FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC APPLICATIONS.)

MATERIALS

- ORGANIC (STRAW, EXCELSIOR, WOVEN PAPER, COCONUT FIBER, ETC.) OR SYNTHETIC MULCH INCORPORATED WITH A POLYPROPYLENE, NATURAL FIBER OR SIMILAR NETTING MATERIAL. (THE NETTING MAY BE BIODEGRADABLE, PHOTODEGRADABLE OR PERMANENT.)

NOTE: SOME EROSION CONTROL BLANKET NETTINGS MAY POSE A THREAT TO CERTAIN SPECIES OF WILDLIFE IF THEY BECOME ENTANGLED IN THE NETTING MATRIX.

- SIX TO 12-INCH STAPLES, PINS, OR STAKES.

INSTALLATION

- SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (E.G., SLOPE, CHANNEL FLOW VELOCITY) PER THE MANUFACTURER'S RECOMMENDATIONS.
- PREPARE THE SEEDBED, ADD SOIL AMENDMENTS, AND PERMANENTLY SEED THE AREA IMMEDIATELY FOLLOWING SEEDBED PREPARATION.
- LAY EROSION CONTROL BLANKETS ON THE SEEDING AREA SO THAT THEY ARE IN CONTINUOUS CONTACT WITH THE SOIL WITH EACH UP-SLOPE OR UP-STREAM BLANKET OVERLAPPING THE DOWN-SLOPE OR DOWN-STREAM BLANKET BY AT LEAST EIGHT INCHES, OR FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN. IN CERTAIN APPLICATIONS, THE MANUFACTURER MAY REQUIRE ADDITIONAL CHECK SLOTS AT SPECIFIC LOCATIONS DOWN SLOPE FROM THE UPPERMOST EDGE OF THE UPPER BLANKETS.
- ANCHOR THE BLANKETS IN PLACE BY DRIVING STAPLES, PINS, OR STAKES THROUGH THE BLANKET AND INTO THE UNDERLYING SOIL. FOLLOW AN ANCHORING PATTERN APPROPRIATE FOR THE SITE CONDITIONS AND AS RECOMMENDED BY THE MANUFACTURER.

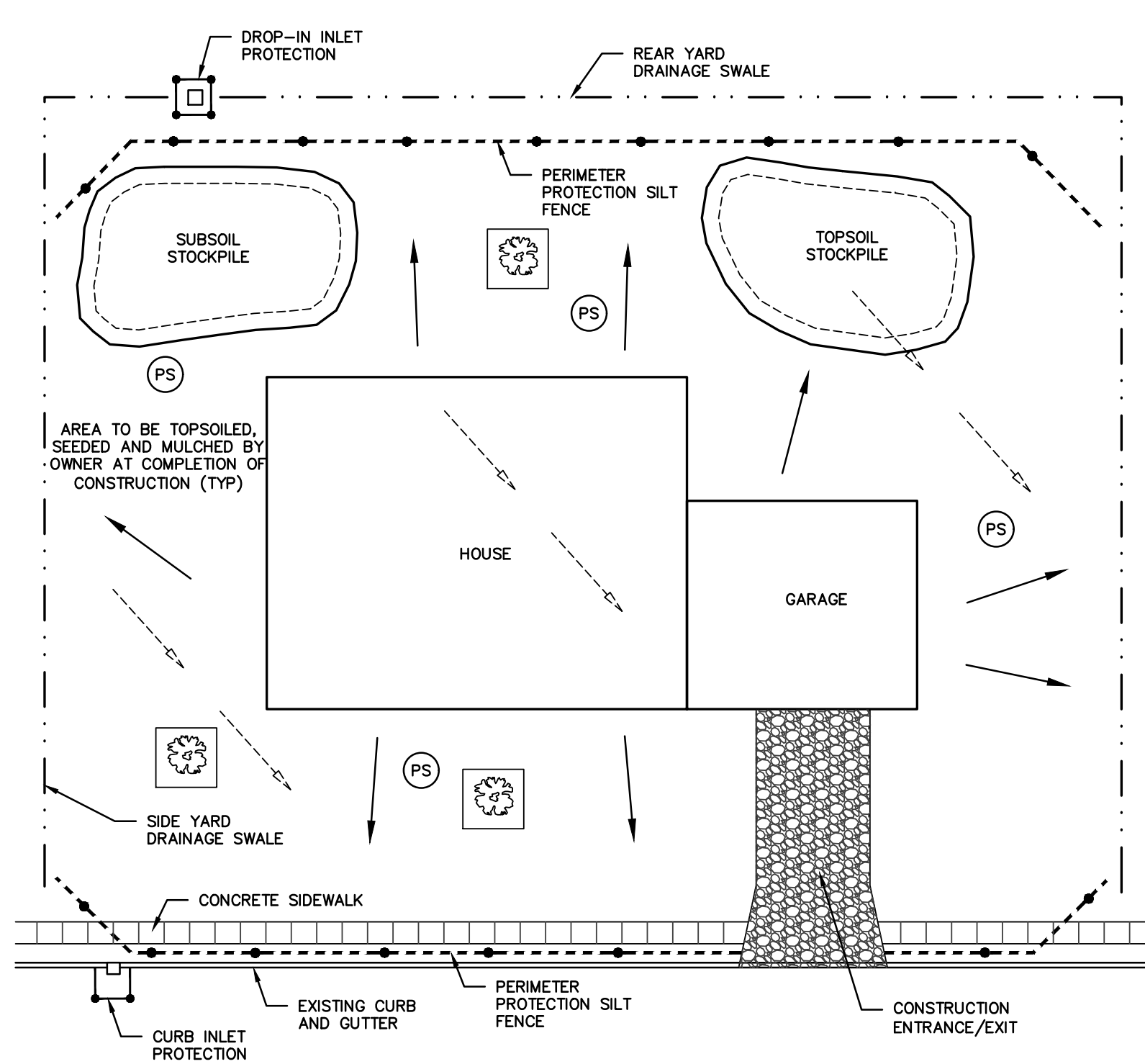
MAINTENANCE

- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.

CHANNEL LININGS UTILIZE STAPLE PATTERN "C" WITH ADDITIONAL STAPLES ON SIDE SLOPES AT PROJECTED WATER LINE.

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE RAINFALL.

AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.



SAMPLE EROSION/SEDIMENT CONTROL PRACTICE PLAN FOR A

NOT TO SCALE

(REV. 01/17)

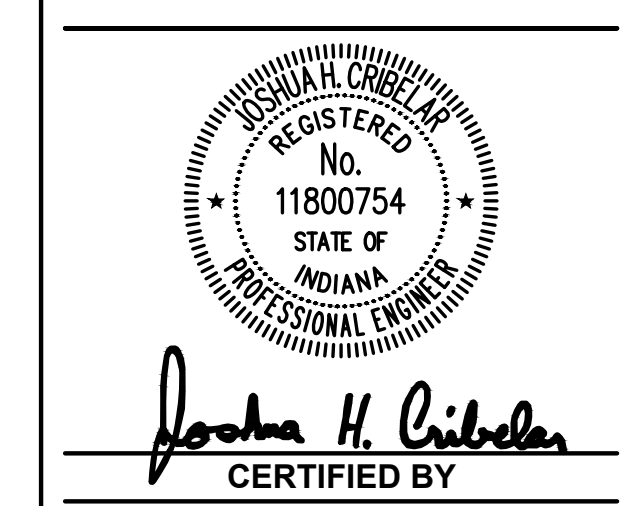


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MEMORIAL PARK REDEVELOPMENT

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ISSUANCE INDEX	
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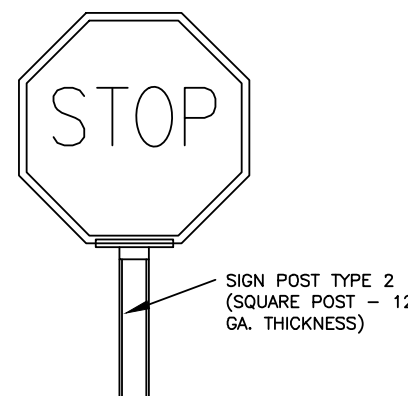
REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

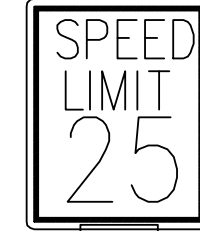
EROSION CONTROL DETAILS

C522

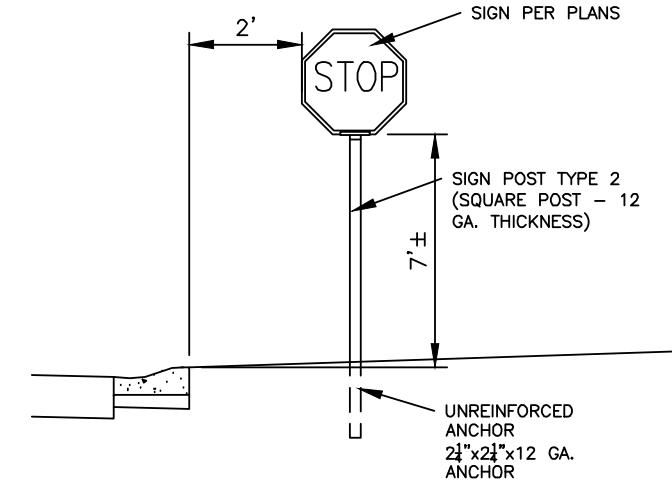
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STOP SIGN
R1-1
30" x 30"

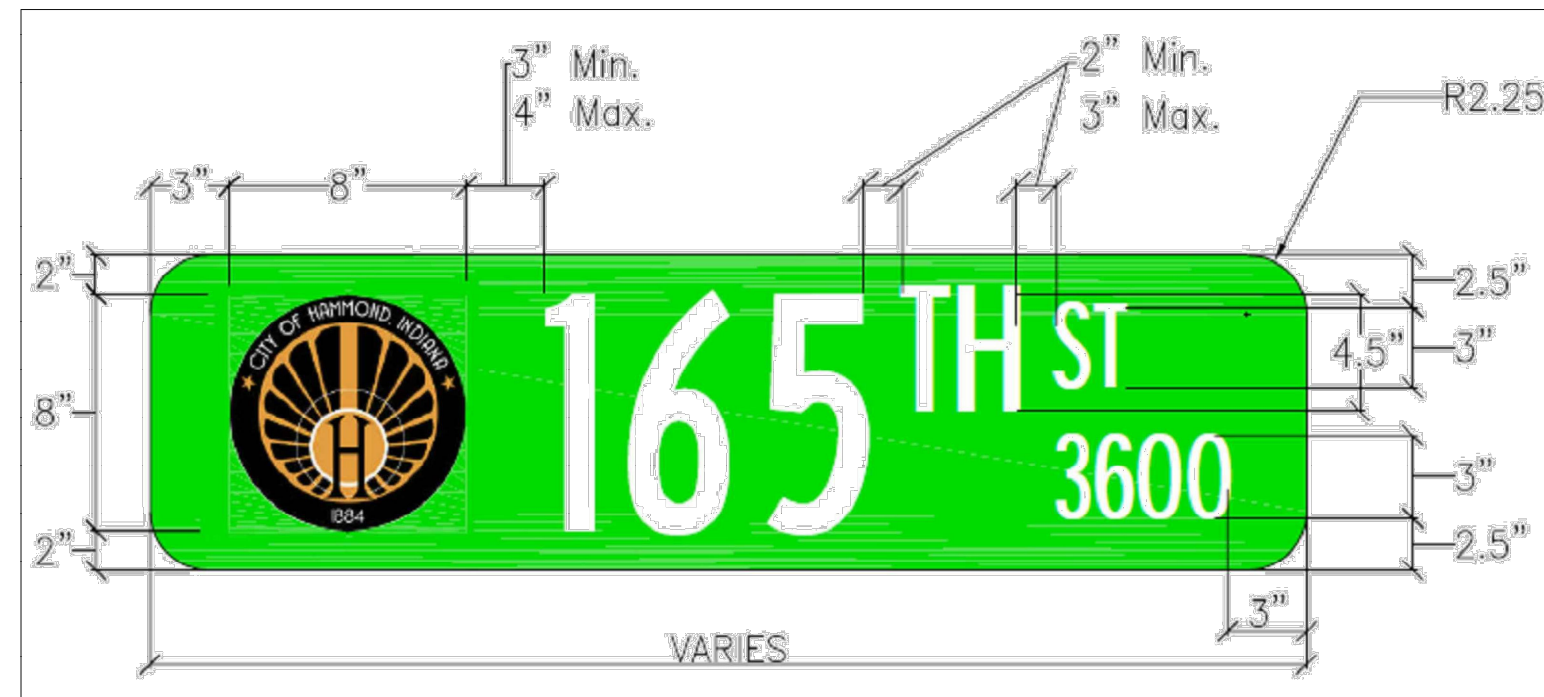


SPEED LIMIT
R2-1
24" x 30"

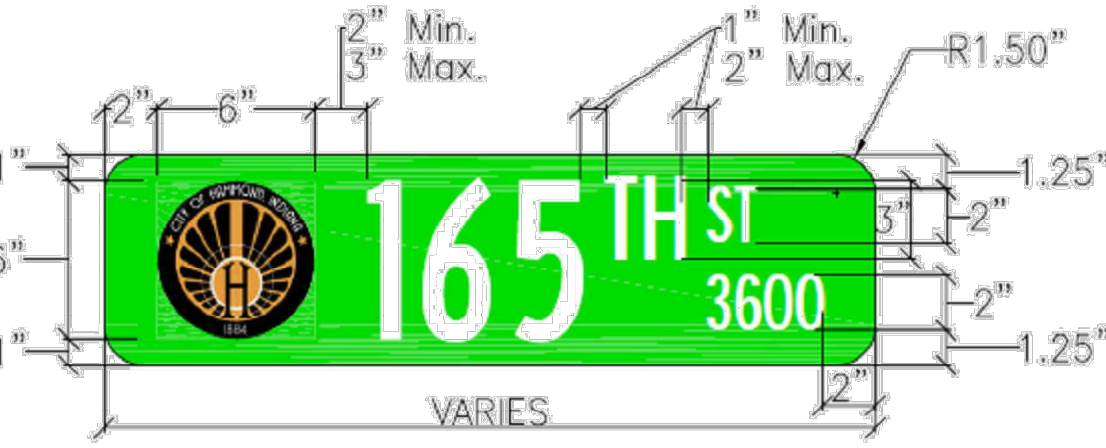


NOTES:
1) SIGN PLACEMENT SHALL MEET INDOT STANDARD SPECIFICATIONS
2) SQUARE POST SHALL BE A BE 12 GA. THICKNESS AND MEET INDOT STANDARD SPECIFICATIONS
3) ALL SIGN SIZES, SHAPES, COLORS, AND MATERIAL SHALL MEET THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

TYPICAL SUBDIVISION REGULATORY SIGNS
NOT TO SCALE

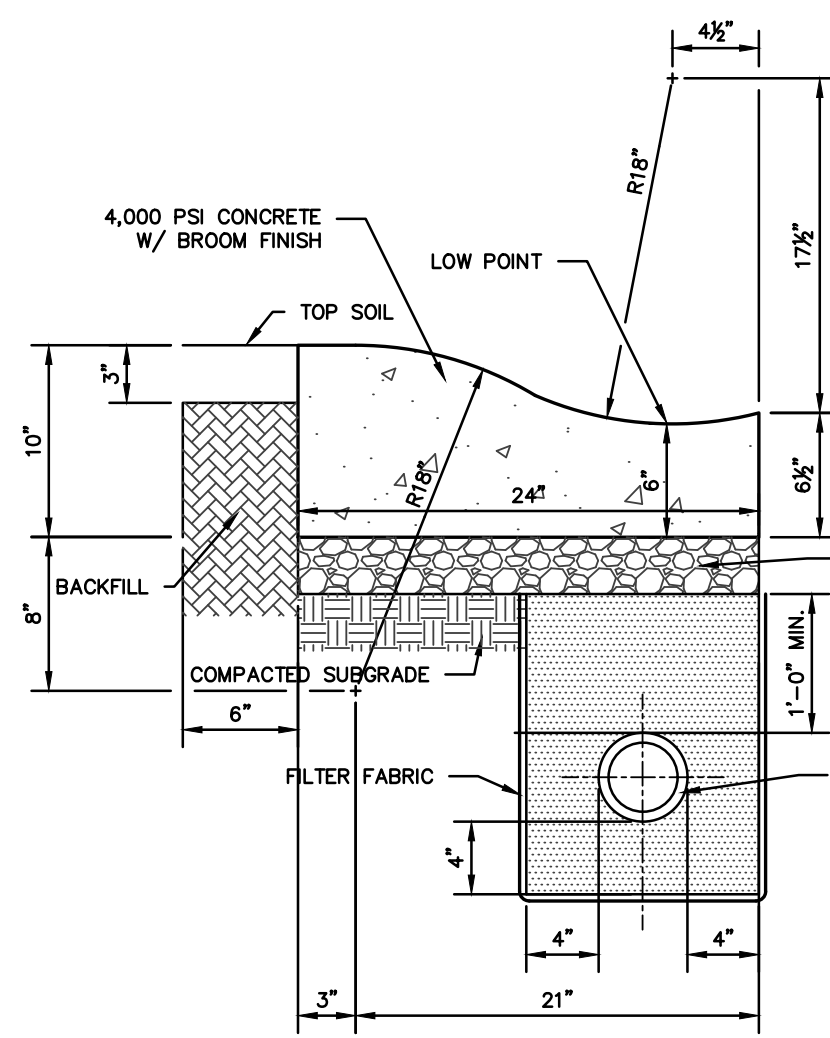


STREET NAME SIGN, OVERHEAD, MASTARM MOUNTED

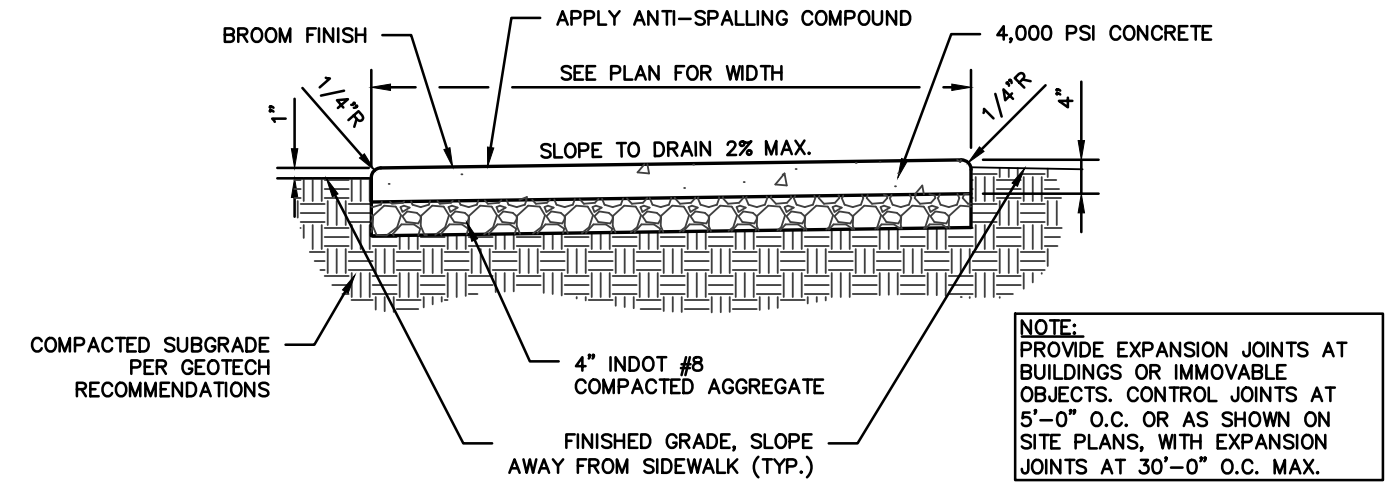


STREET NAME SIGN, GROUND, POST MOUNTED

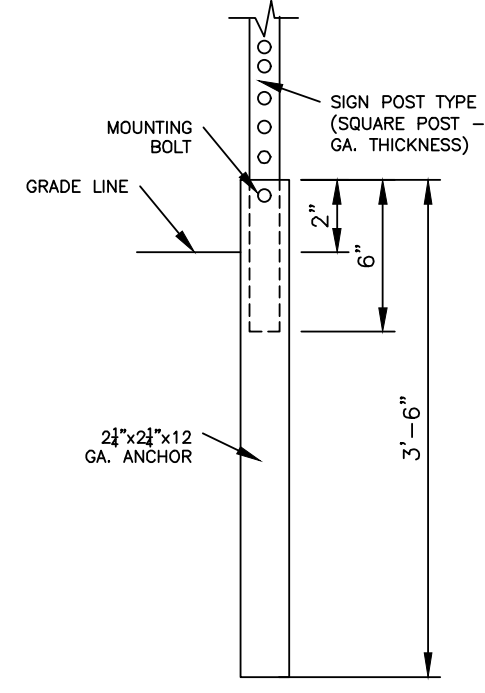
TYPICAL STREET SIGN DETAIL
NOT TO SCALE



CONCRETE ROLL CURB & GUTTER
NOT TO SCALE (REV. 12/17)

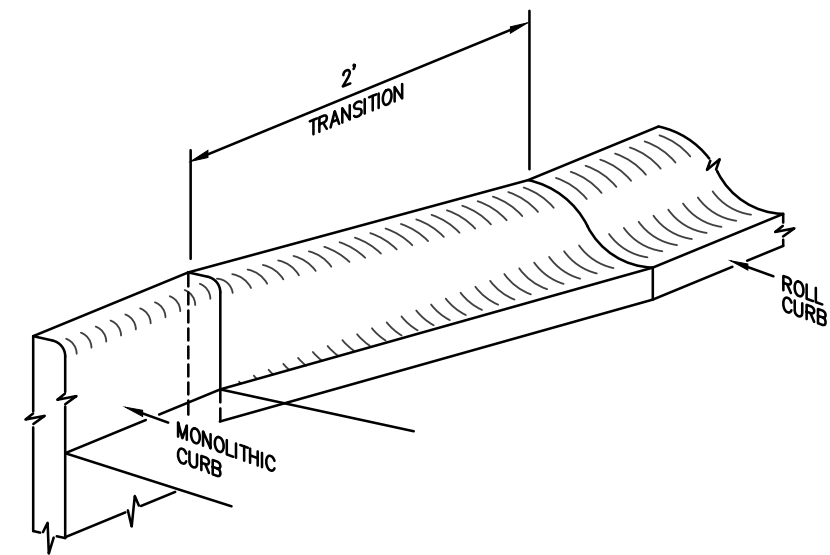


CONCRETE SIDEWALK
NOT TO SCALE (REV. 10/17)

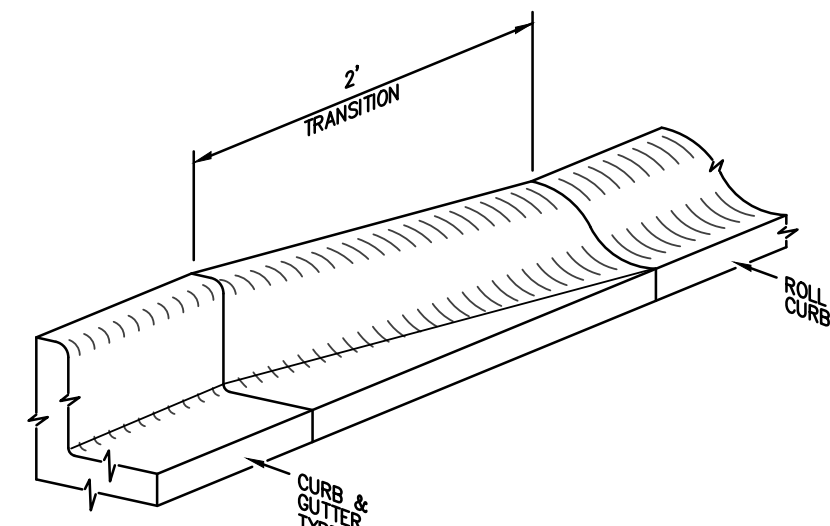


UNREINFORCED ANCHOR BASE AND POST
NOT TO SCALE

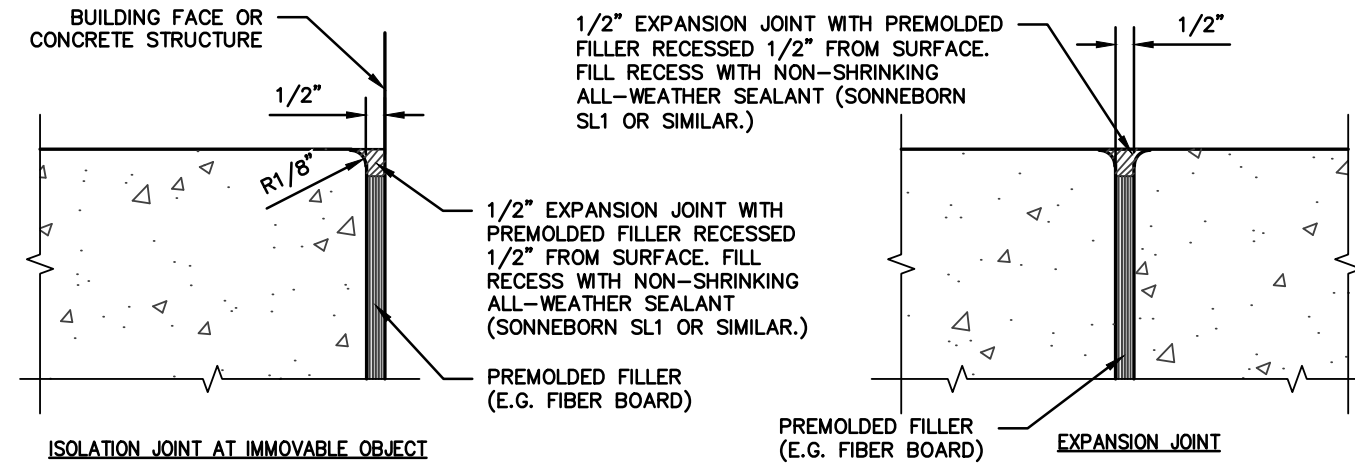
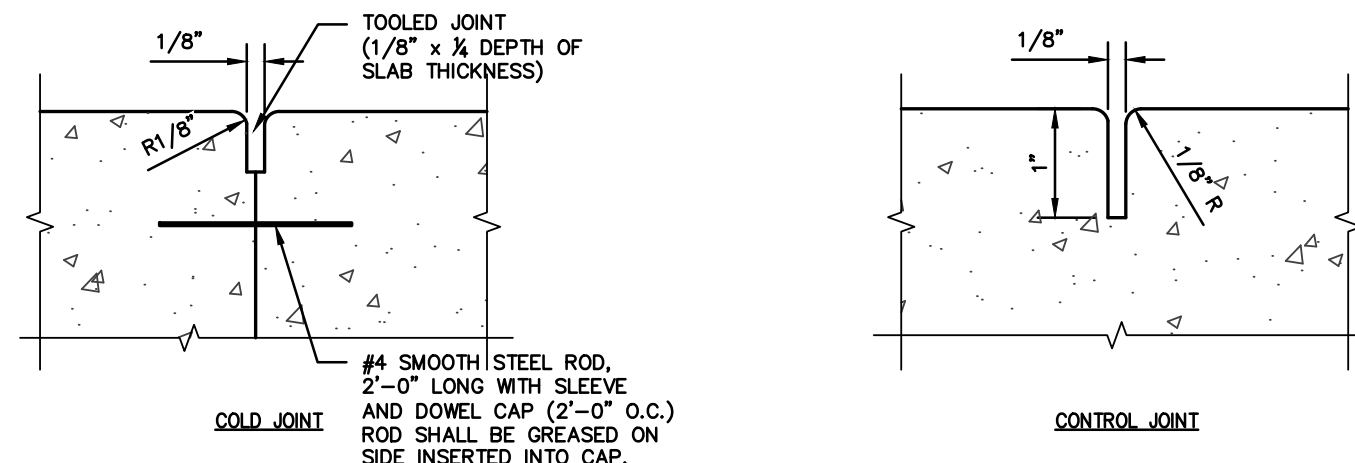
EXISTING/PROPOSED PAVEMENT JOINT
NOT TO SCALE



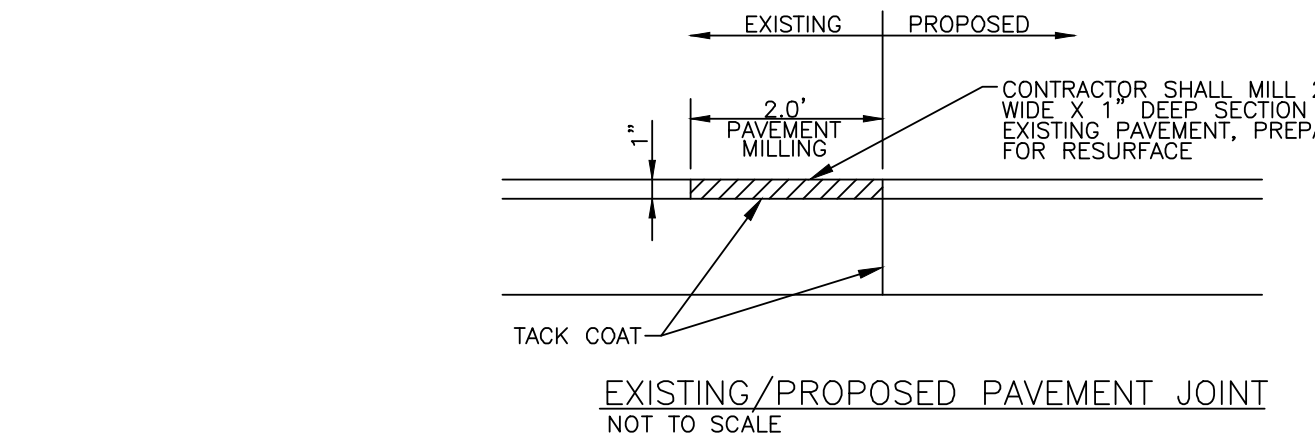
MONOLITHIC CURB TO ROLL CURB - TRANSITION
NOT TO SCALE (REV. 01/16)



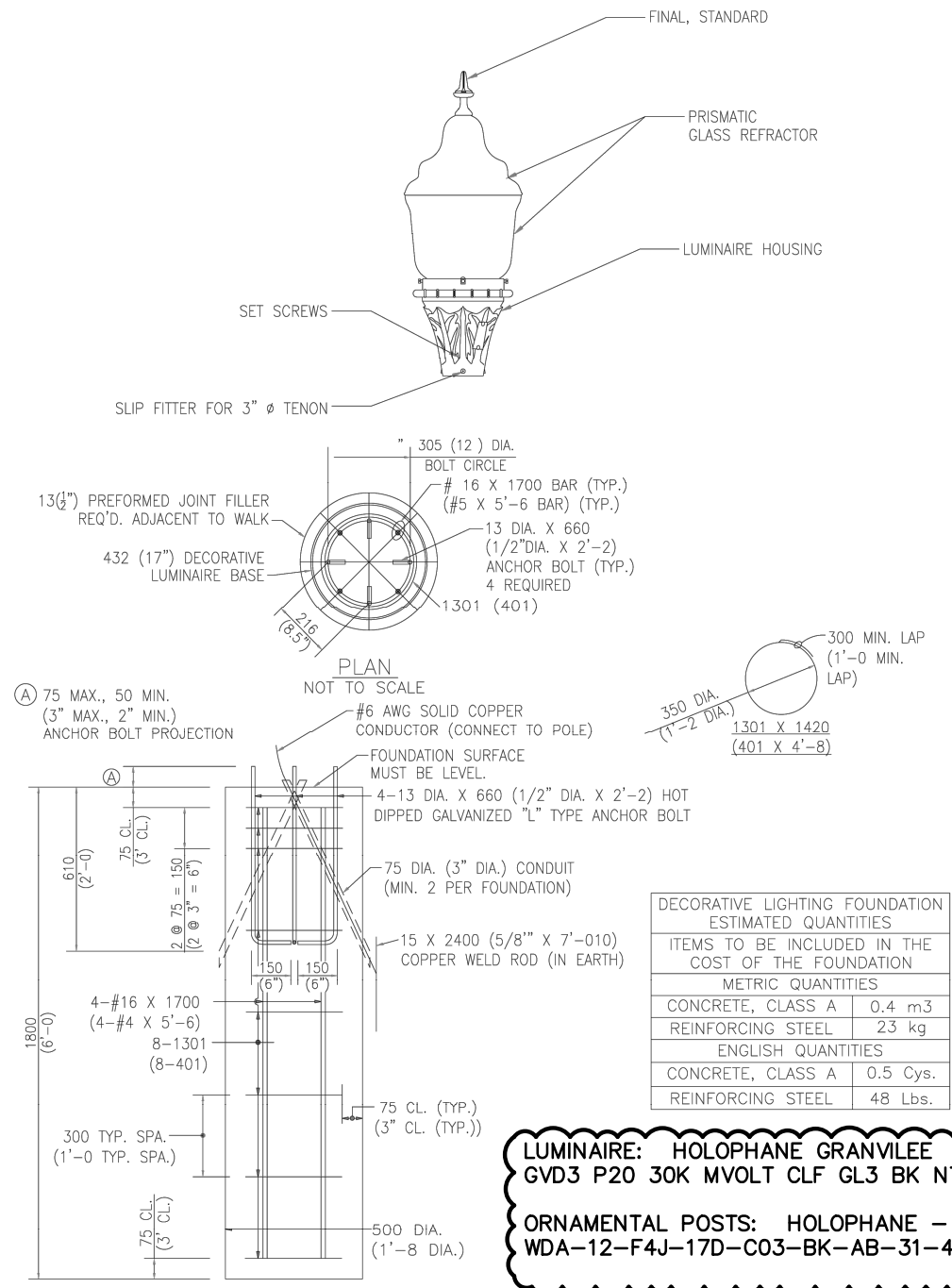
CURB & GUTTER TO ROLL CURB TRANSITION
NOT TO SCALE (REV. 01/16)



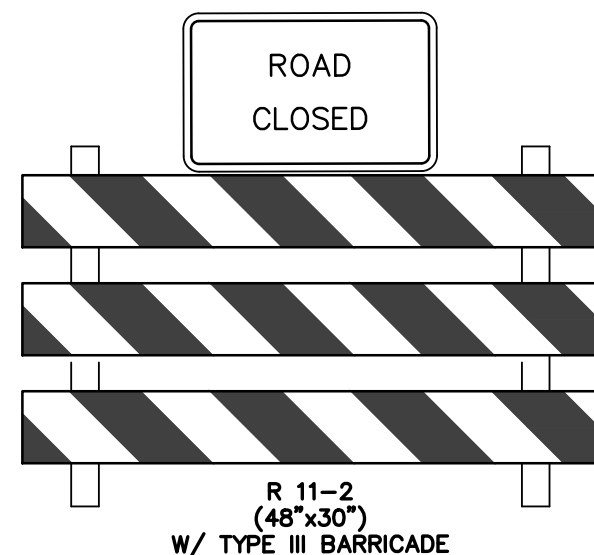
TYPICAL CONCRETE JOINT DETAILS
NOT TO SCALE (REV. 01/17)



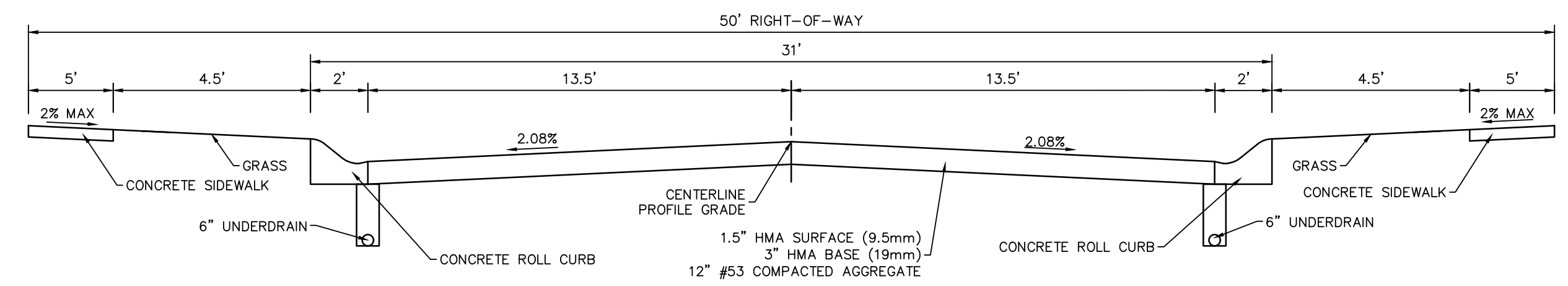
CURB JOINT DETAIL
NOT TO SCALE (REV. 01/17)



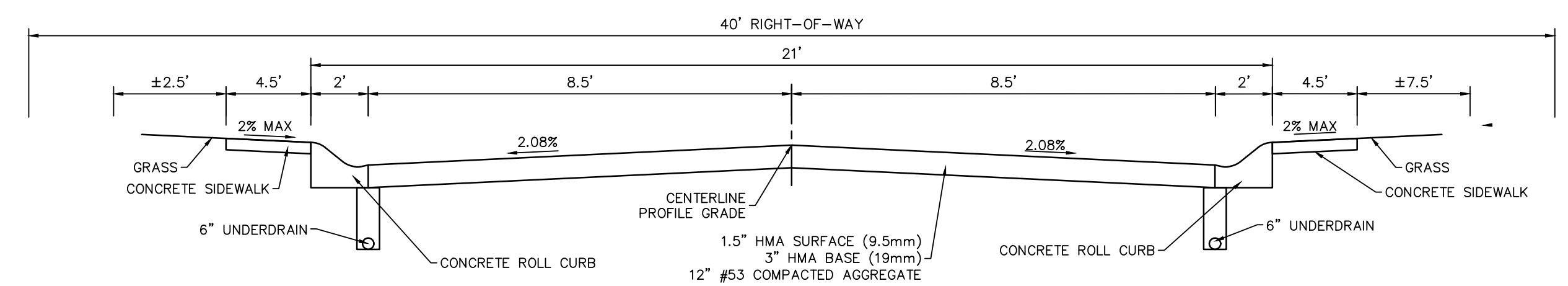
TYPICAL LIGHT POLE
NOT TO SCALE



R 11-2 (48" x 30")
W/ TYPE III BARRICADE



TYPICAL LOCAL ROAD RIGHT-OF-WAY SECTION
NOT TO SCALE



SAGAMORE STREET RIGHT-OF-WAY SECTION
NOT TO SCALE



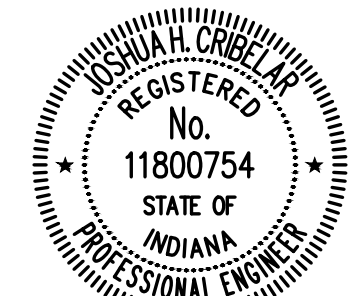
City of Hammond
Mayor Thomas M. McDermott Jr.
5925 Calumet Avenue
Hammond, IN 46320



8605 Broadway, Suite B | Merrillville, Indiana 46410
TEL 219.923.9240 | FAX 219.923.9241
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j.cristler@structurepoint.com

MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



Joshua H. Cristler
CERTIFIED BY

ISSUANCE INDEX		
DATE:	11/14/2024	
PROJECT PHASE:	CONSTRUCTION DOCUMENTS	

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

STREET DETAILS

C600

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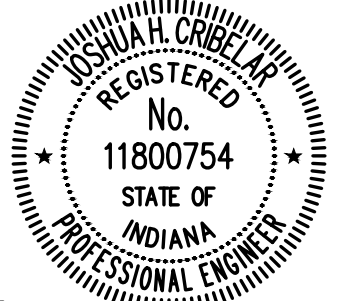
City of Hammond
Mayor Thomas M. McDermott Jr.
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Hammond, IN 46320

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STRUCTUREPOINT
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8605 Broadway, Suite B | Merrillville, Indiana 46410
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MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
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Joshua H. Cristofari
CERTIFIED BY

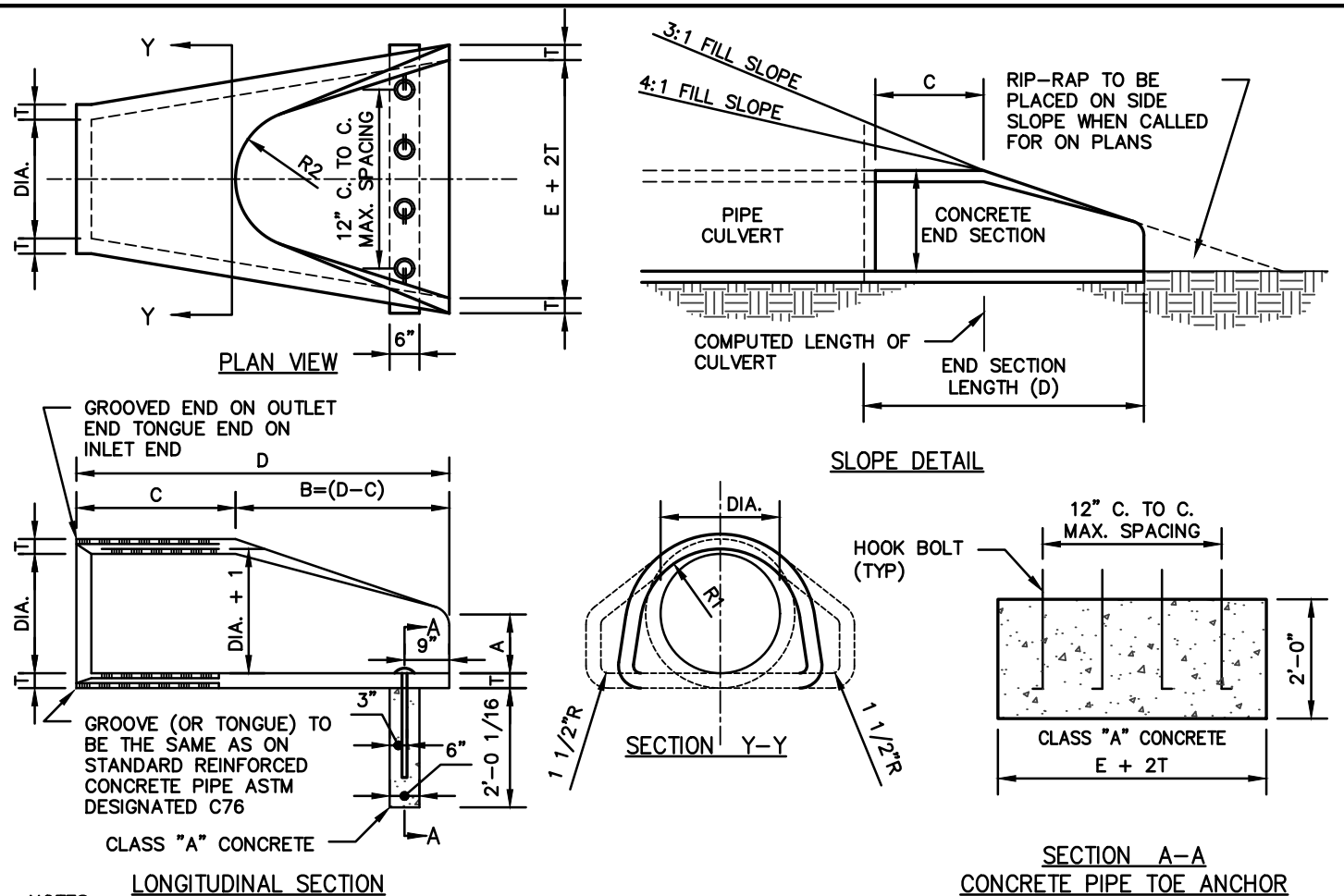
ISSUANCE INDEX	
DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

STORM SEWER DETAILS

C610



UNDERDRAIN RISER DETAIL
NOT TO SCALE (REV. 01/17)

CONCRETE IN THESE END SECTIONS SHALL BE THE SAME GRADE AND STRENGTH AS SPECIFIED FOR REINFORCED CONCRETE PIPE, A.S.T.M. DESIGNATION C-76

REINFORCEMENT IN THE "C" PORTION SHALL BE THE SAME AS SPECIFIED FOR REINFORCED CONCRETE, A.S.T.M. DESIGNATION C-76 FOR THE SIZE OF CONNECTING PIPE.

REINFORCEMENT IN THE "B" PORTION SHALL HAVE A CROSS SECTIONAL AREA EQUAL TO THAT OF ONE LAYER OF STEEL IN THE "C" PORTION.

THE END OF THE PIPE CULVERT SHALL BE PLACED IN THE CONCRETE END SECTION SO THAT THE FLOW LINES ARE FLUSH. THE JOINT SHALL BE COMPLETELY FILLED WITH MORTAR.

IN 3:1 OR 4:1 FILL SLOPE, CHANGE TO THE SLOPE OF THE END SECTION IN A SMOOTH, PLEASING TRANSITION APPROXIMATELY 10'-0" IN LENGTH.

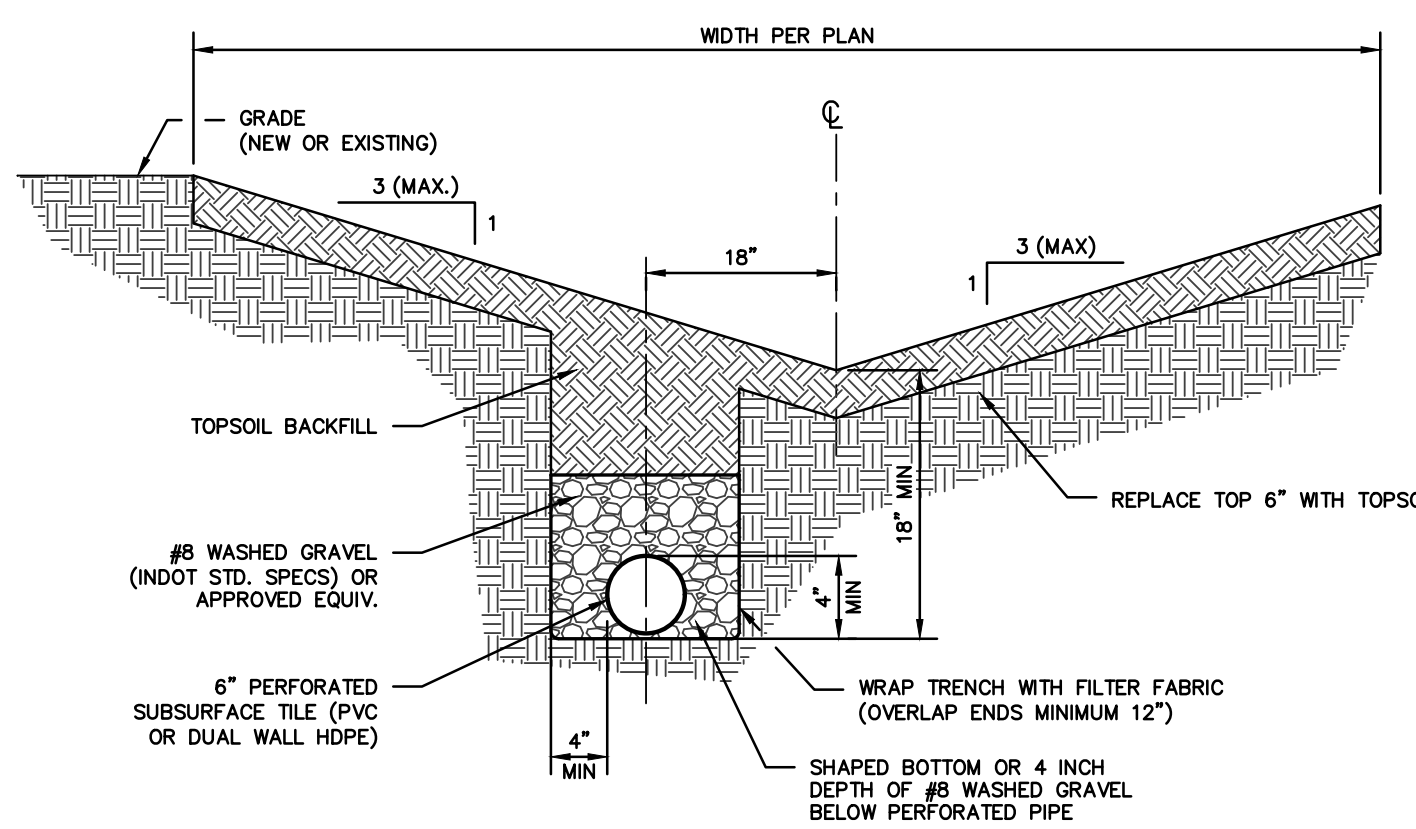
VARIATIONS IN DIMENSIONS - THE THICKNESS OR THE CONCRETE, THE POSITION OF STEEL, AND THE INTERNAL DIAMETER OF THE PIPE SHALL CONFORM WITH THE VARIATIONS IN DIMENSIONS AS PROVIDED IN THE SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, A.S.T.M. DESIGNATION C-76.

CONCRETE PIPE TOE ANCHORS SHALL BE REQUIRED ON ALL CONCRETE PIPE END SECTIONS.

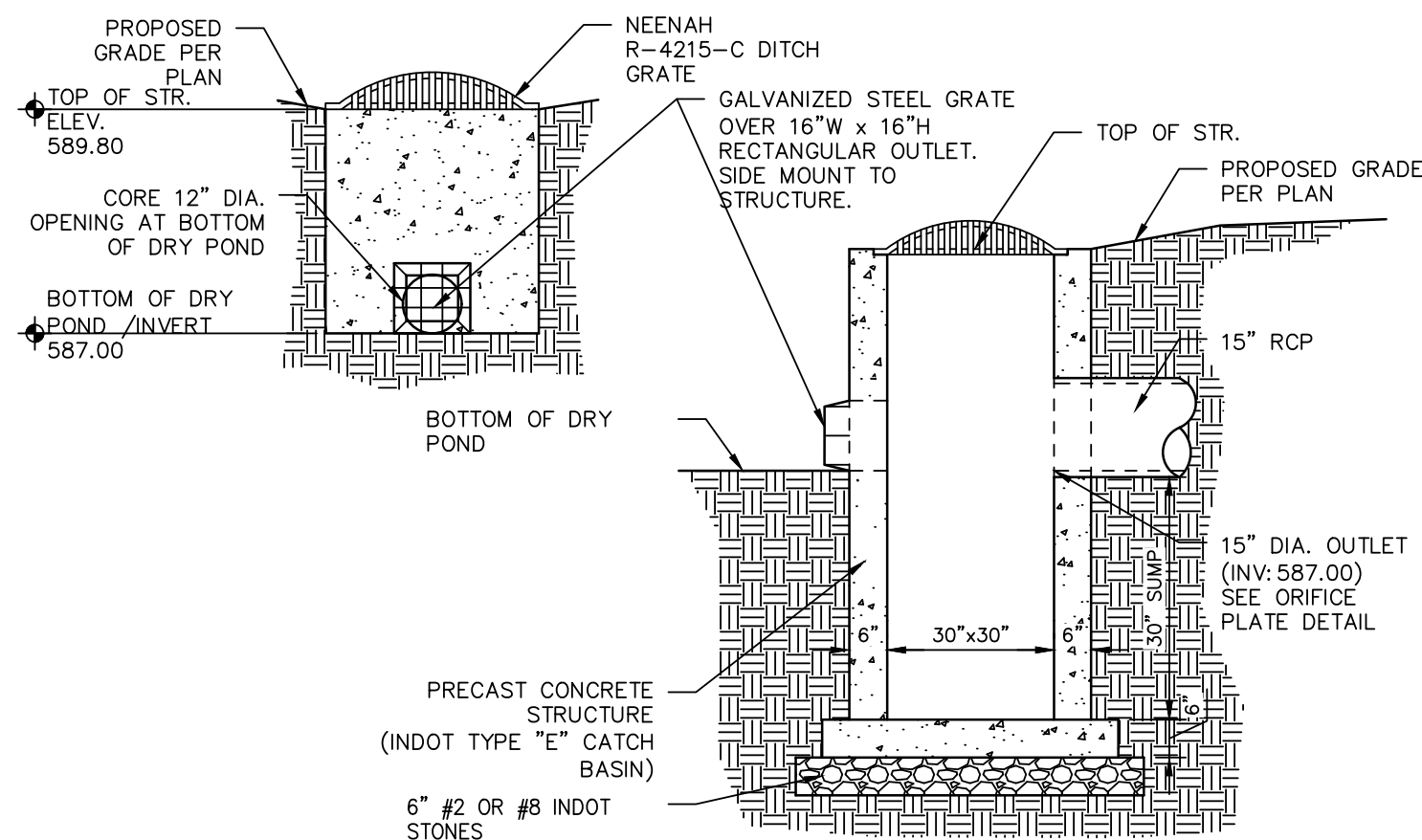
DIA.	T (MIN.)	A*	C*	D*	E*	R1	R2
12"	2"	5"	4'-3"	6'-2"	2'-0"	10 1/8"	9"
15"	2 1/4"	7"	4'-0"	6'-3"	2'-6"	12 1/2"	11"
18"	2 1/2"	11"	4'-1"	6'-2"	3'-0"	15 1/2"	12"
21"	2 3/4"	11"	3'-6"	6'-3"	3'-6"	16 1/8"	13"
24"	3"	12"	2'-8"	6'-3"	4'-0"	16 3/16"	14"
27"	3 1/4"	15"	2'-5"	6'-3"	4'-6"	18 3/16"	14 1/2"
30"	3 1/2"	14"	1'-10"	6'-3"	5'-0"	18 1/2"	15"
33"	3 3/4"	10"	3'-6"	6'-3"	5'-6"	23 3/4"	17 1/2"
36"	4"	17"	3'-1"	6'-3"	6'-0"	24 3/16"	20"
42"	4 1/2"	21"	2'-11"	6'-2"	7'-0"	27 1/2"	22"
48"	5"	24"	2'-2"	6'-2"	8'-0"	28 1/2"	22"
54"	5 1/2"	27"	2'-9"	6'-2"	9'-0"	33 1/8"	24"
60"	6"	30"	3'-3"	6'-3"	10'-0"	36 11/16"	24"
66"	6 1/2"	30"	2'-3"	6'-3"	11'-0"	36 1/8"	24"
72"	7"	36"	1'-5"	6'-3"	9'-0"		
84"	8"	36"	1'-5"	9'-3 1/2"	10'-0"		

* RADIUS COMES FURNISHED BY MANUFACTURER

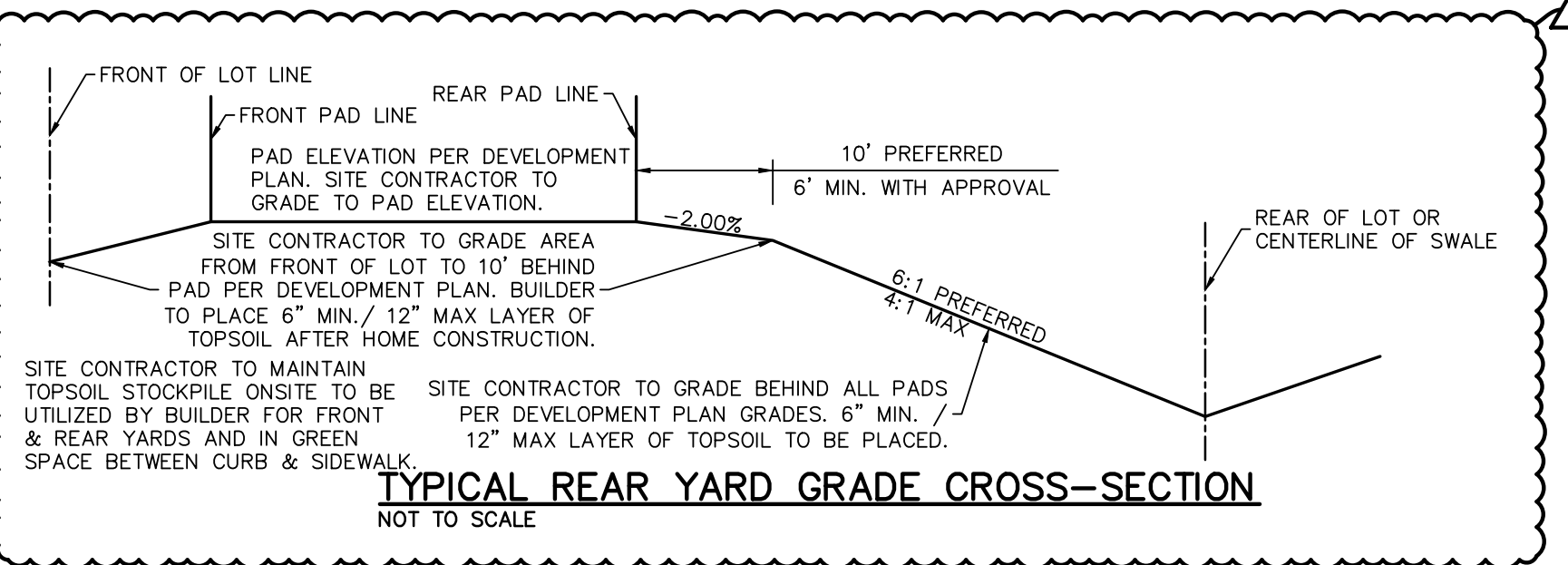
PRECAST CONCRETE END SECTION DETAIL
NOT TO SCALE (REV. 06/18)



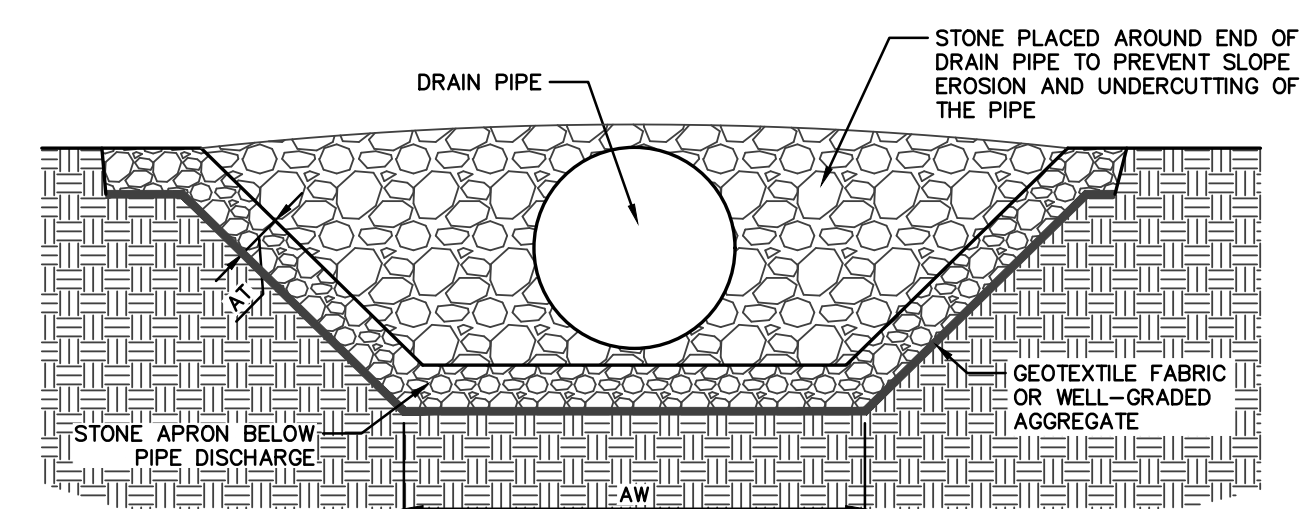
V-BOTTOM SWALE UNDERDRAIN DETAIL
NOT TO SCALE (REV. 08/18)



DRY POND OUTLET STRUCTURE DETAIL
NOT TO SCALE (REV. 06/18)



PRECAST CONCRETE REAR YARD GRADE CROSS-SECTION
NOT TO SCALE



RIPRAP OUTLET PROTECTION
NOT TO SCALE (REV. 12/17)

AL = APRON LENGTH (FEET)
AW = APRON WIDTH (FEET)
AT = APRON THICKNESS (FEET)

NOTE: AW IS THE APRON WIDTH AT THE NARROW END OF THE APRON.

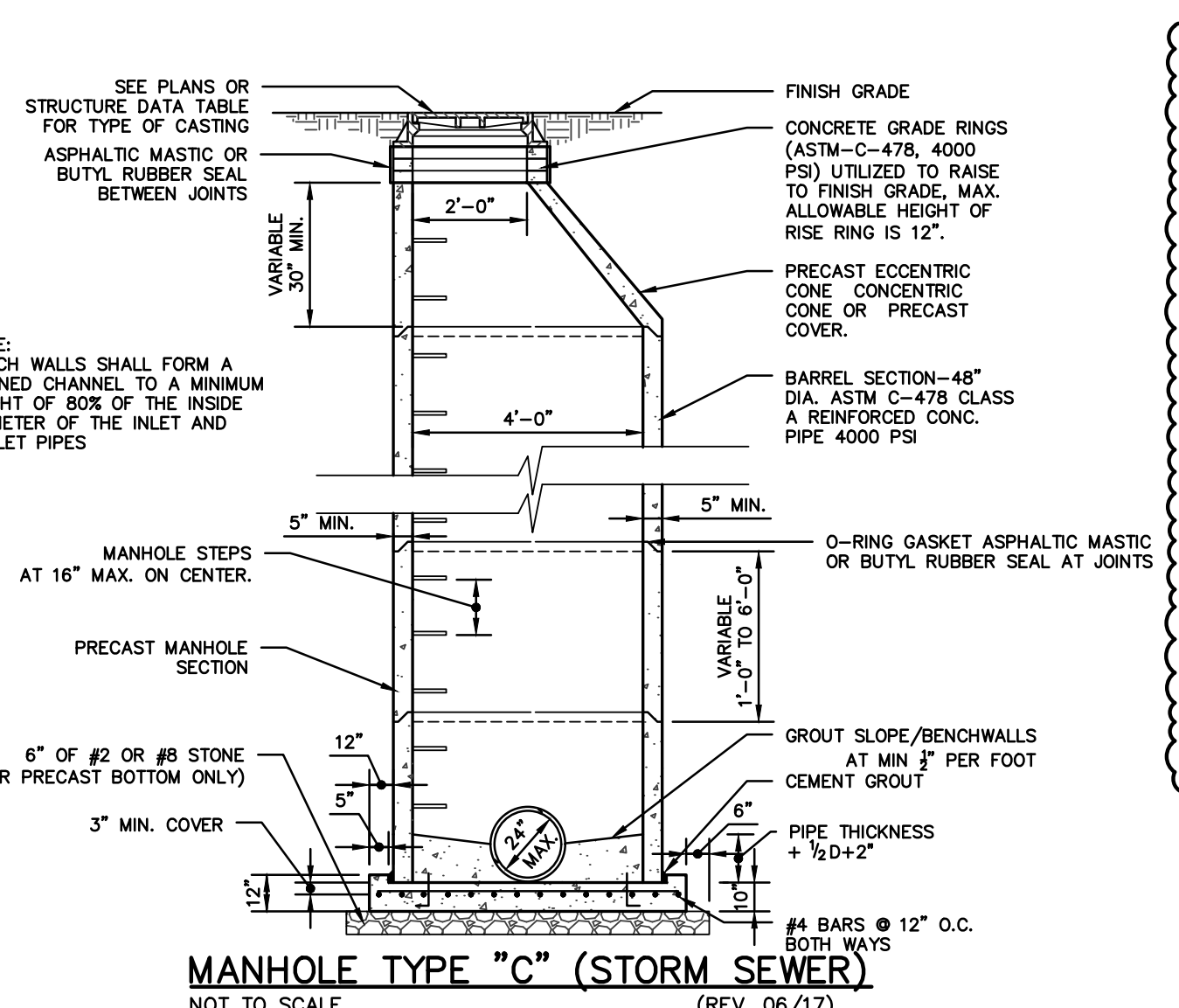
SPECIFICATIONS

- CAPACITY
 - PEAK RUNOFF FROM A 10-YEAR FREQUENCY, 24-HOUR STORM EVENT OR THE DESIGN DISCHARGE OF THE WATER CONVEYANCE STRUCTURE, WHICHEVER IS GREATER.
- MAXIMUM VELOCITY
 - TEN FEET PER SECOND.
- APRON
 - ALIGNED STRAIGHT WITH CHANNEL FLOW. IF A CURVE IS NECESSARY TO ALIGN THE RECEIVING STREAM, LOCATE THE CURVE IN THE UPSTREAM SECTION OF THE APRON.
 - THICKNESS
 - 1.2 TIMES THE MAXIMUM STONE DIAMETER FOR A d_{50} STONE SIZE OF 15 INCHES OR LARGER.
 - 1.5 TIMES THE MAXIMUM STONE DIAMETER FOR A d_{50} STONE SIZE OF 15 INCHES OR LESS.

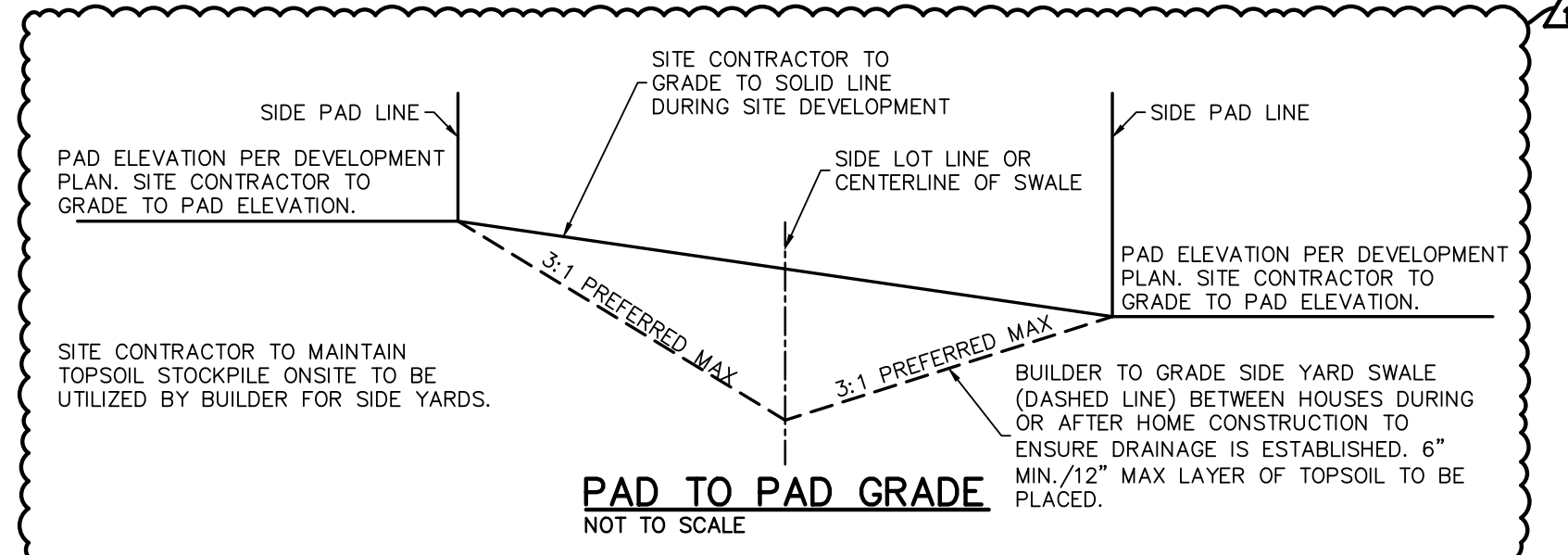
TABLE 1. SIZING FOR FLOW DISSIPATORS AT CULVERT PIPE OUTLETS

PIPE SIZE	MEDIAN RIPRAP DIAMETER	APRON WIDTH**	APRON LENGTH**
8 IN.	6 IN. MIN.	2 TO 3 FT.	5 TO 7 FT.
12 IN.	6 IN. MIN.	3 TO 4 FT.	6 TO 10 FT.
15 IN.	6 IN. MIN.	4 TO 6 FT.	6 TO 12 FT.
18 IN.	6 IN. MIN.	4 TO 6 FT.	8 TO 16 FT.
21 IN.	6 IN. MIN.	6 TO 8 FT.	8 TO 16 FT.
24 IN.	9 IN. MIN.	6 TO 8 FT.	12 TO 18 FT.
30 IN.	9 IN. MIN.	8 TO 10 FT.	14 TO 20 FT.
36 IN.	9 IN. MIN.	10 TO 12 FT.	16 TO 22 FT.
42 IN.	9 IN. MIN.	12 TO 14 FT.	18 TO 24 FT.
48 IN.	12 IN. MIN.	12 TO 14 FT.	18 TO 26 FT.
54 IN.	12 IN. MIN.	14 TO 16 FT.	22 TO 28 FT.
60 IN.	12 IN. MIN.	15 TO 17 FT.	22 TO 32 FT.
66 IN.	12 IN. MIN.	17 TO 19 FT.	24 TO 36 FT.
72 IN.	12 IN. MIN.	18 TO 20 FT.	26 TO 40 FT.
84 IN.	18 IN. MIN.	21 TO 23 FT.	30 TO 44 FT.

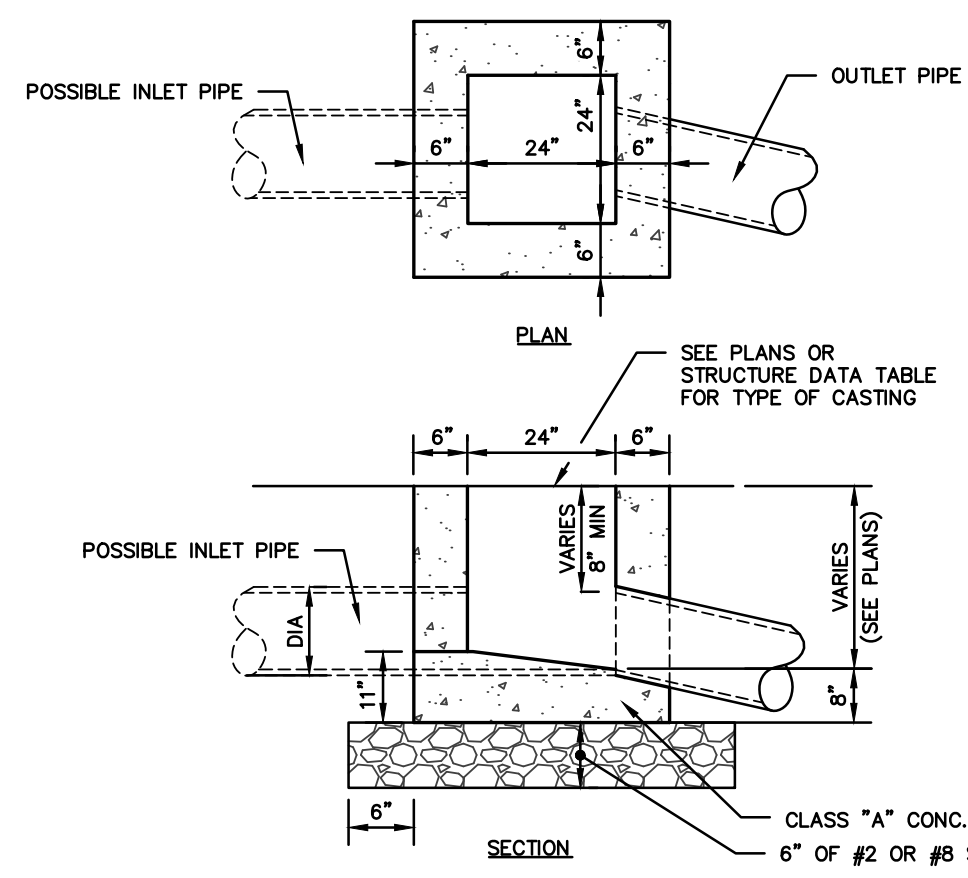
**APRON WIDTH AT THE NARROW END OF APRON (PIPE OR CHANNEL OUTLET).
**SELECT LENGTH TAKING INTO CONSIDERATION THE LOW FLOW (NO PRESSURE HEAD) OR HIGH FLOW (PRESSURE HEAD) CONDITIONS OF THE CULVERT PIPE



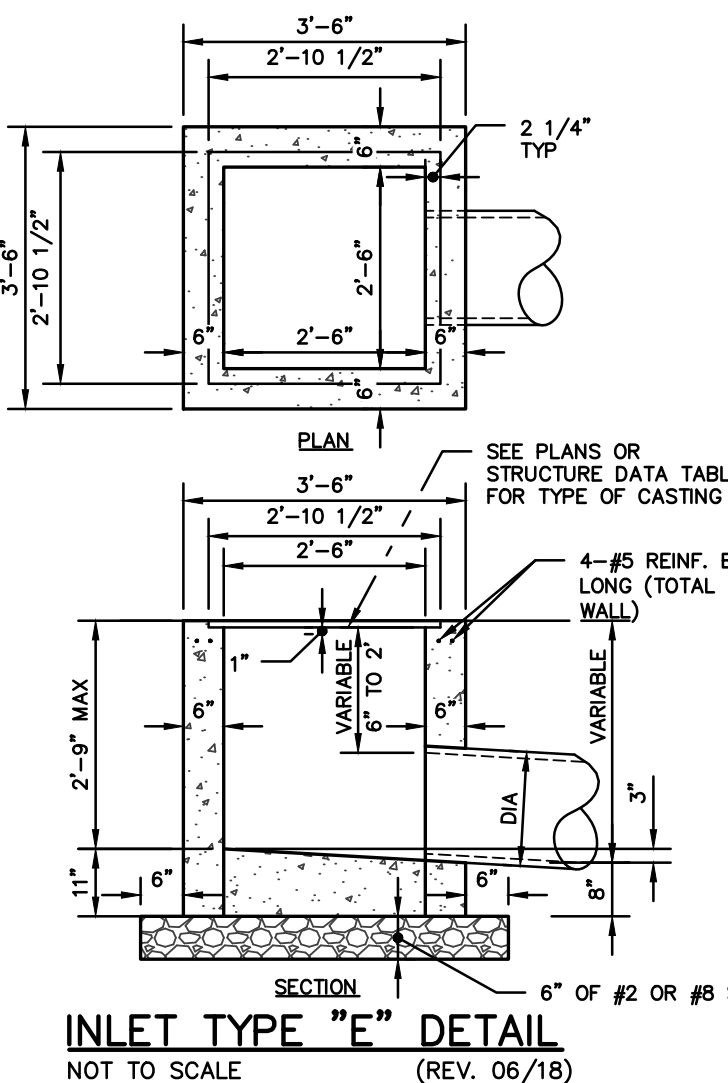
MANHOLE TYPE "C" (STORM SEWER)
NOT TO SCALE (REV. 06/17)



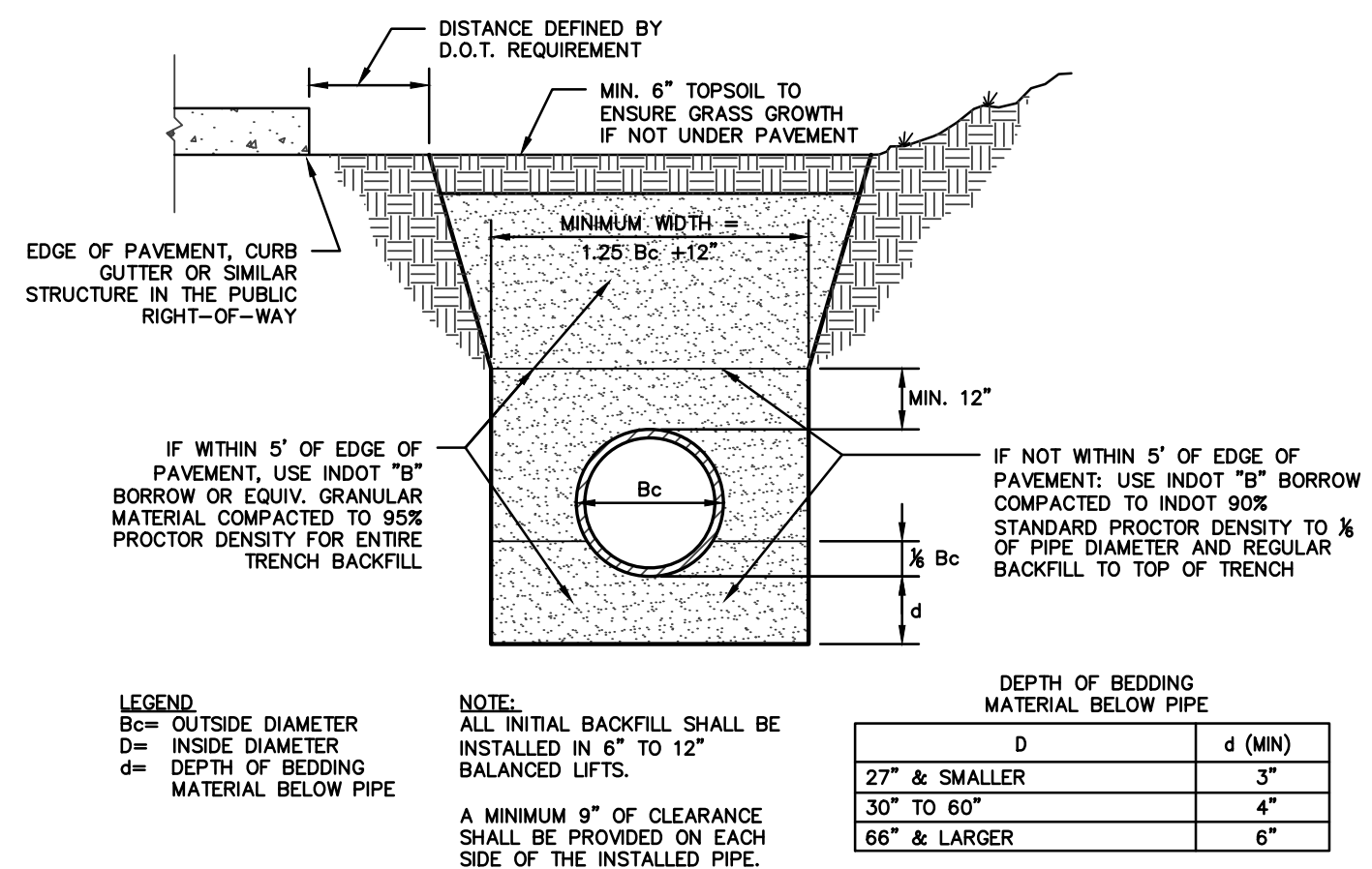
PAD TO PAD GRADE
NOT TO SCALE



INLET TYPE "A" DETAIL
NOT TO SCALE (REV. 06/18)



INLET TYPE "E" DETAIL
NOT TO SCALE (REV. 06/18)



REINFORCED CONCRETE PIPE (RCP) BEDDING DETAIL
NOT TO SCALE (REV. 12/17)

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IDEM SANITARY SEWER SPECIFICATIONS

- Standard specifications of the Department of Transportation (INDOT) shall apply for all work and materials. Sanitary sewer pipe shall be installed in accordance with Section 715 of the current INDOT standard specifications handbook.
- Sanitary sewer gravity pipe, unless pressure rated pipe required per IAC or directional drilled pipe, shall be Polyvinyl Chloride (PVC) in accordance with ASTM D3034-89 with a minimum wall thickness designation of SDR 35 and installed per ASTM D2321-89 specification. PVC pipe used shall be grooved bell, spigot ends, and gasketed. The pipe shall be made of PVC plastic having a cell classification of 12454B.
- PVC sanitary sewer gravity fittings shall also conform to the requirements of the ASTM D3034-89 specification. All fittings shall be molded in one piece with standard pipe bells, gaskets, and spigot ends. Single piece molded PVC with standard pipe bells, gaskets, and spigot ends for back-to-back tee wyes are acceptable. Wall thickness of all fittings shall have a minimum designation of SDR 26. Gaskets for elastomeric joints shall be molded with a minimum cross-sectional area of 0.20 square inches and conform to ASTM F477 specification.
- All sanitary manholes shall be precast concrete manholes in accordance with ASTM C478 and Section 720 of the current INDOT standard specifications handbook. G-rings shall conform to C443. Double row of Kent Seal or equivalent shall also be applied to all joints and between riser rings and castings. Manhole step spacing shall be no more than 16-inches. Manholes shall be air tested for leakage in accordance with ASTM C1244-02, Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test.
 - Installation and operation of vacuum equipment and indicating devices must be in accordance with manufacturers' recommendations and performance specifications which have been provided by the manufacturer and accepted by the City Engineer. The vacuum equipment must be capable of testing the entire manhole, including the casting and riser rings.
 - With the vacuum tester set in place:
 - Connect the vacuum pump to the outlet port with the valve open.
 - Draw a vacuum of ten (10) inches of Hg. (5 psi) and close the valve.
 - Accepted standards for leakage will be established from the elapsed time for a negative pressure change from ten (10) inches to nine (9) inches of mercury. The maximum allowable leakage rate for a four (4) foot diameter manhole must be in accordance with the following:

Manhole Depth	Pressure Change of 1 Inch Hg
10 feet or less	60 seconds
>10 feet but <15 feet	75 seconds
>15 feet but <25 feet	90 seconds

 For manholes five (5) feet in diameter, add an additional fifteen (15) seconds and for manholes six (6) feet in diameter, add an additional thirty (30) seconds to the time requirements for four (4) foot diameter manholes. For all manholes deeper than twenty-five (25) feet, the Engineer will determine the applicable minimum elapsed time.

- If the manhole fails the test, necessary repairs must be made. The vacuum test and repairs must be repeated until the manhole passes the test.
- If manhole joint sealants are pulled out during the vacuum test, the manhole must be disassembled and the joint sealants replaced.
- Manholes will be subject to visual inspection with all visual leaks being repaired.

- Butyl rubber coating with plastic wrap shall be applied around each manhole joint from 3-inches above to 3-inches below each joint. The appropriate primer shall be applied prior to applying the rubber coating. Inside joints to be filled with precast plug material. Entire exterior surface of sanitary sewer manholes shall be sprayed with a bituminous coating and all exterior gap exposure of riser rings shall be back plastered or grouted with nonshrink grout.

- The manhole chimneys, including all riser rings shall be sealed using flex rib internal chimney seal manufactured by CreteX, NPC, or a City approved equal. The flex rib internal chimney seal shall extend from a minimum of 3-inches below the top of the cone section to 3-inches over the manhole casting per manufacturer's installation procedures if directed otherwise. Internal Chimney Seal shall be installed after manhole vacuum testing and prior to final acceptance. Water test may be done, per manufacturer or City's recommendation, to provide assurance that internal chimney seal is water tight.

- The casting elevations are set by plan, however, the castings are to be adjusted in the field by the City's representative should a discrepancy occur between plan grade and existing grade. New manhole ring(s) and cover shall be installed to establish grade. Maximum height of adjusting rings shall be 12-inch on existing structure adjustment and 10-inch maximum on new construction.

- Backfill around all installed or proposed manhole structures, sidewalks, bike paths and/or all paved areas shall be made with granular material (b-borrow) or No. 8 stone, up to 18-inches below cross-section thickness (which shall include "No. 53" stone depth). If more stringent backfill requirements are set out per city, town, county, specifications those standards shall be followed. Trench opening within 5-feet of the back of the curb of paved roadways, shall be backfilled with granular material or No. 8 stone in accordance with Section 211 of the current INDOT standard specifications handbook.

- The Contractor shall be responsible for verifying that all state highways, city, and county permits have been obtained by the developer prior to start of construction.

- Initial subsults shall be presented to the inspecting engineer prior to final submittal to the City for review, otherwise Contractor shall be required to furnish the developer's Engineer with a set of prints showing actual sewer locations and inverts including lateral location, depth, and length. Such submittals must be received by the Engineer before the final contract payment can be authorized.

- The sanitary sewer laterals and stubs termination shall be indicated on the surface with a detectable metal post set immediately above the said termination point if full connection is not immediately made.

- All sanitary sewer lines upon completion will be required to pass a low pressure air test. Said test shall be conducted according to ASTM F1417-92, and shall be witnessed by a City employee or the City's representative. The testing shall be in accordance with Table 1 as follows with 0.5 psi being added for each foot of water above the sewer line being tested. Sewer lines shall be subject to visual leak inspection at downstream manholes with all visual leaks being repaired and subject to televising requests by the City.

- Prior to final deflection test (mandrel test) all mainlines shall be cleaned and free of any debris. Deflection tests shall be performed on all flexible* pipe after the final backfill has been in place at least 30 days. No pipe shall exceed a vertical deflection of 5% deflection test results. (*The following are considered non-flexible pipes: concrete pipe, ductile iron pipe, and cast iron pipe). The deflection test shall be performed with a nine-point mandrel. Proving rings shall be available at time of test otherwise no testing will be allowed. All mandrel testing shall be witnessed by a City employee or the City's representative.

- The ends of all laterals are to be plugged water tight with a gasketed cap capable of withstanding a low pressure air test without leakage. Laterals shall be subject to visual leak inspection at downstream manholes with all visual leaks being repaired.

- Bedding for flexible pipe and rigid pipe shall be No. 8 crushed stone from 6-inches below to 12-inches above the pipe. Manholes shall be placed on no less than 6-inches of No. 8 crushed stone bedding.

- Water line, utility, and legal drain crossings and separations shall be in accordance with 327 IAC 3-6-9.

- The trench shall be opened sufficiently ahead of pipe laying to reveal obstruction, and shall be properly protected and/or barricaded when left unattended.

- No water shall be permitted to flow into the sanitary sewer system during construction. Contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet in accordance with state and federal laws and regulations (327 IAC 3-6-20). Any pipe entering existing sewers shall be plugged with screw type mechanical, braced plug until such time as all tests on the sewers and all punch list items are complete.

- All sewer laterals installed shall be bedded the same as the main line sewer.

- Forty-eight (48) hours notice shall be given to the City prior to the start of sewer construction. Also, 48 hours notice shall be given prior to doing any testing on the sewer.

- Manhole castings shall be stamped SANITARY SEWER (Neenah Casting R-1772 or East Jordan 10221GS) and be self-sealing type. The casting flange shall be 34 inches and the clear opening shall be min. 20- 13/16 inches. Watertight castings shall be bolt- down East Jordan 10221PT and also stamped SANITARY SEWER.

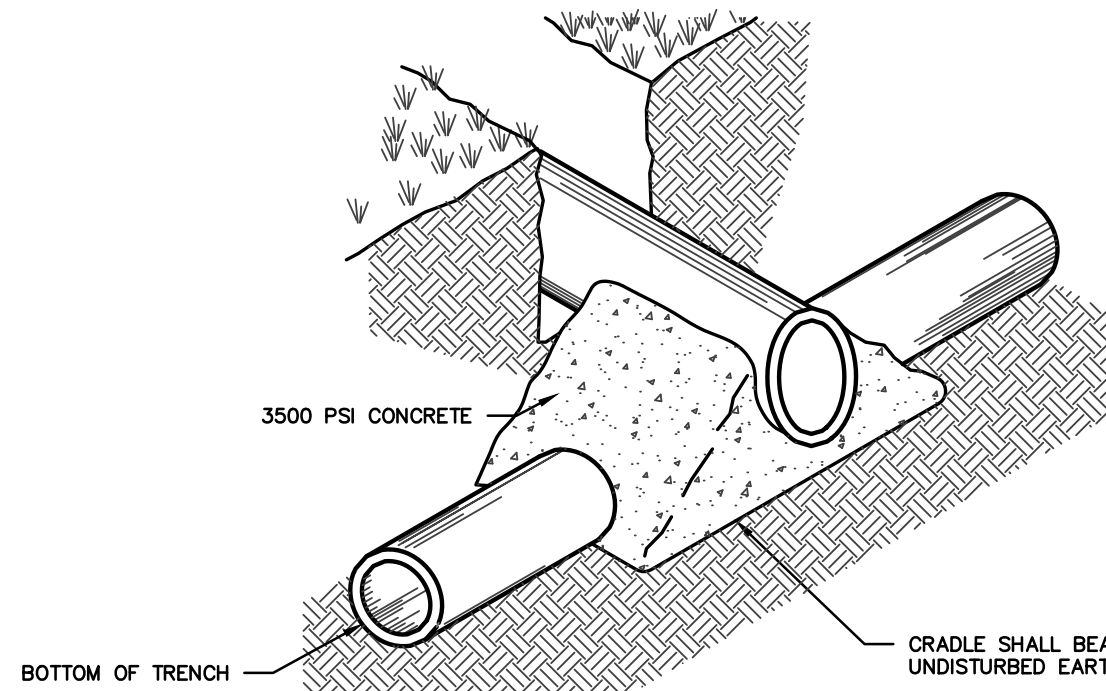
- The minimum slope of the sewer shall be:

Size of Pipe	Minimum Constructed Slope
8-inch	0.40%
10-inch	0.28%
12-inch	0.22%
15-inch	0.15%
18-inch	0.12%

- The Contractor shall provide measurements of the slope of the sewer for each manhole section as construction proceeds. Such measurements shall be certified by a Registered Land Surveyor or Engineer and be available on-site for observation by the City's Inspector. No more than three manhole sections can be constructed in advance of such measurements.

- In the event the Contractor does not meet the minimum slopes, the sewer section and any other affected sewer sections shall be reconstructed to meet such minimum slopes.

- Laterals are to be installed with a minimum 14 gauge tracer wire from the wye to the terminus. Upon lateral completion the contractor for the building or home will extend the wire from this terminus to the building cleanout adjacent to the building.

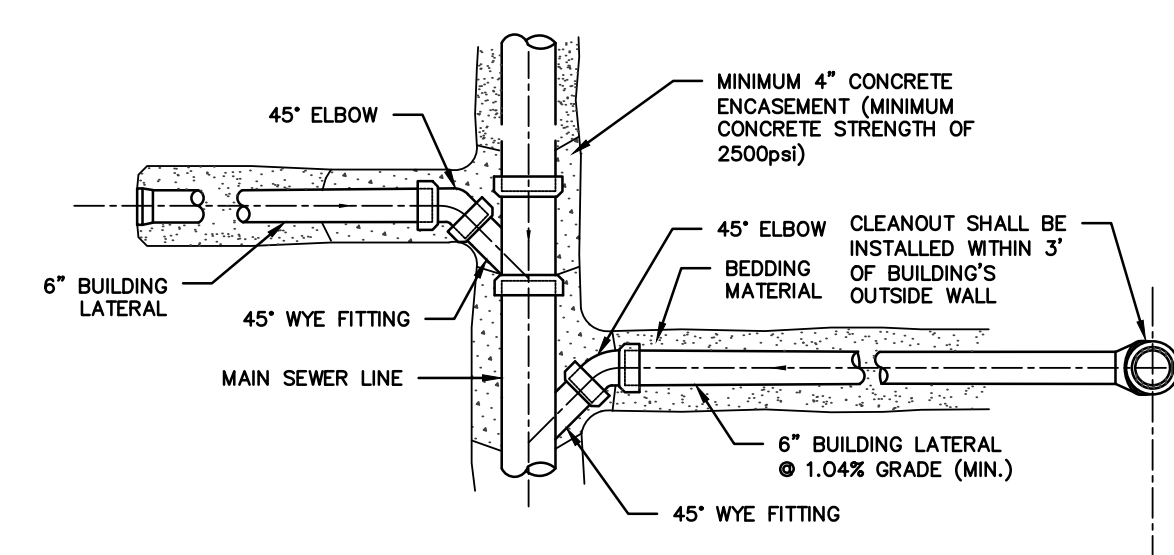


CONCRETE CRADLE DETAIL
NOT TO SCALE (REV. 01/17)

NOTE: TO BE USED WHEN CLEAR DISTANCE (FROM EXTERIOR PIPE DIAMETER TO EXTERIOR PIPE DIAMETER) BETWEEN SANITARY SEWER PIPING (MAINS, LATERALS, FORCE MAINS, ETC.) AND ALL OTHER PIPES IS 18" OR LESS, PER ENGINEER'S DIRECTION, OR WHERE NOTED ON THE CONSTRUCTION PLANS. A MINIMUM CLEAR DISTANCE OF 3" MUST BE PROVIDED TO MAINTAIN STRUCTURAL INTEGRITY OF THE CONCRETE.

CONCRETE MUST NOT COME INTO CONTACT WITH FORCE MAIN. AT LEAST 3" OF SAND MUST BE PLACED AS A CUSHION AROUND THE FORCE MAIN.

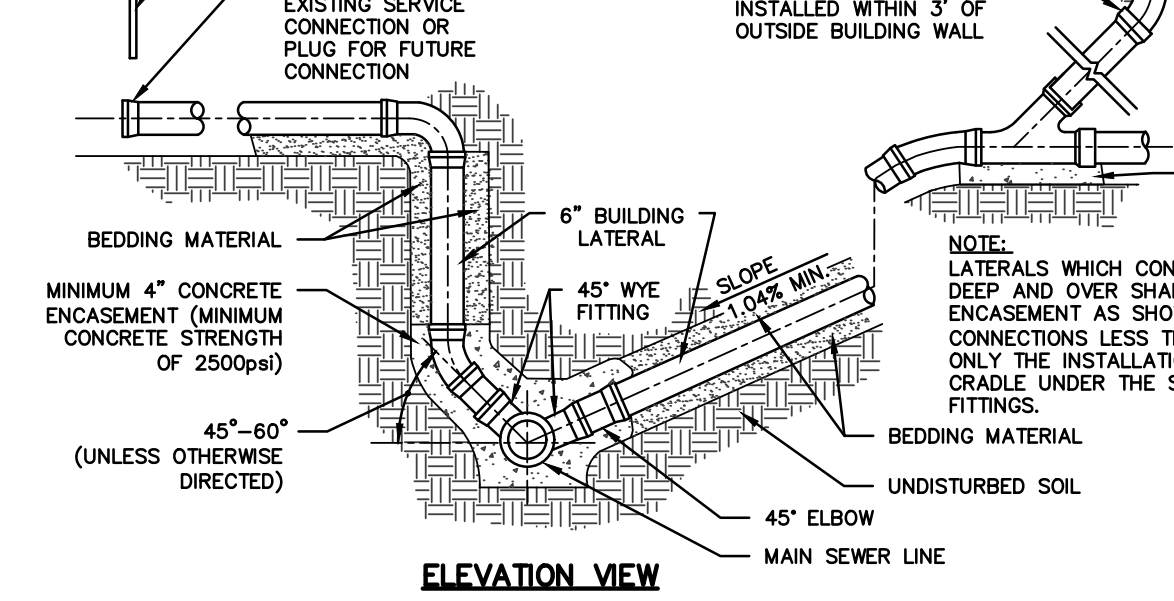
IF THE CONFLICT IS BETWEEN A WATER MAIN AND ANY SANITARY SEWER PIPING, 18" CLEARANCE MUST BE MAINTAINED OR NOTE ABOVE APPLIES AND ONLY GRANULAR FILL MAYBE USED.



PLAN VIEW

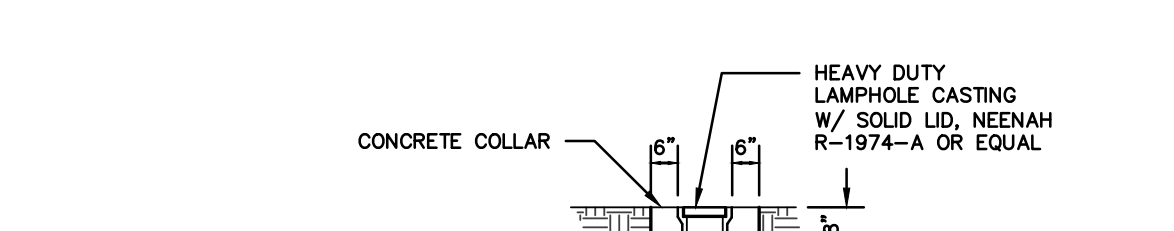
NOTE: CLEANOUT SHALL BE INSTALLED WITHIN 3' OF BUILDING'S OUTSIDE WALL.

A MINIMUM 4" DIA. PIPE CLEANOUT SHALL BE INSTALLED WITHIN 3' OF OUTSIDE BUILDING WALL.

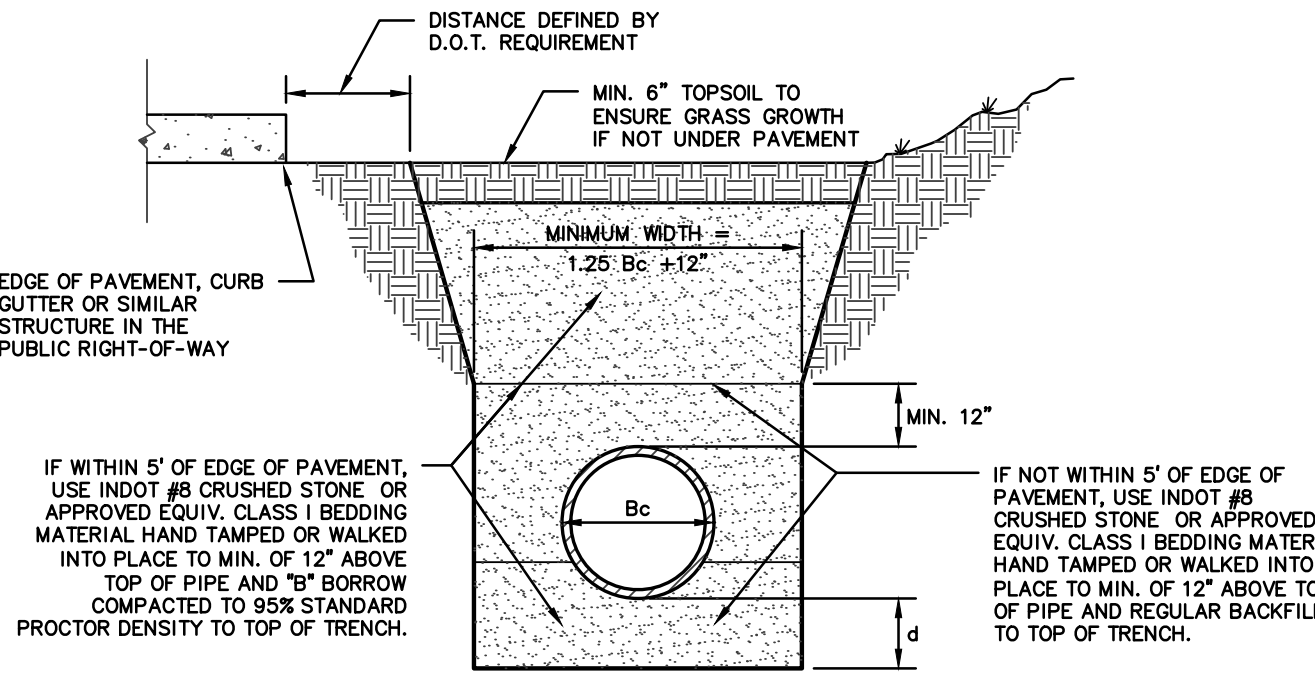


ELEVATION VIEW

NOTE: LATERALS WHICH CONNECT TO SEWERS 15' DEEP AND OVER SHALL HAVE CONCRETE ENCASEMENT AS SHOWN. SERVICE CONNECTIONS LESS THAN 15' REQUIRE ONLY THE INSTALLATION OF A CONCRETE CRADLE UNDER THE SEWER MAIN AND FITTINGS.



LATERAL CONNECTION
NOT TO SCALE (REV. 01/17)

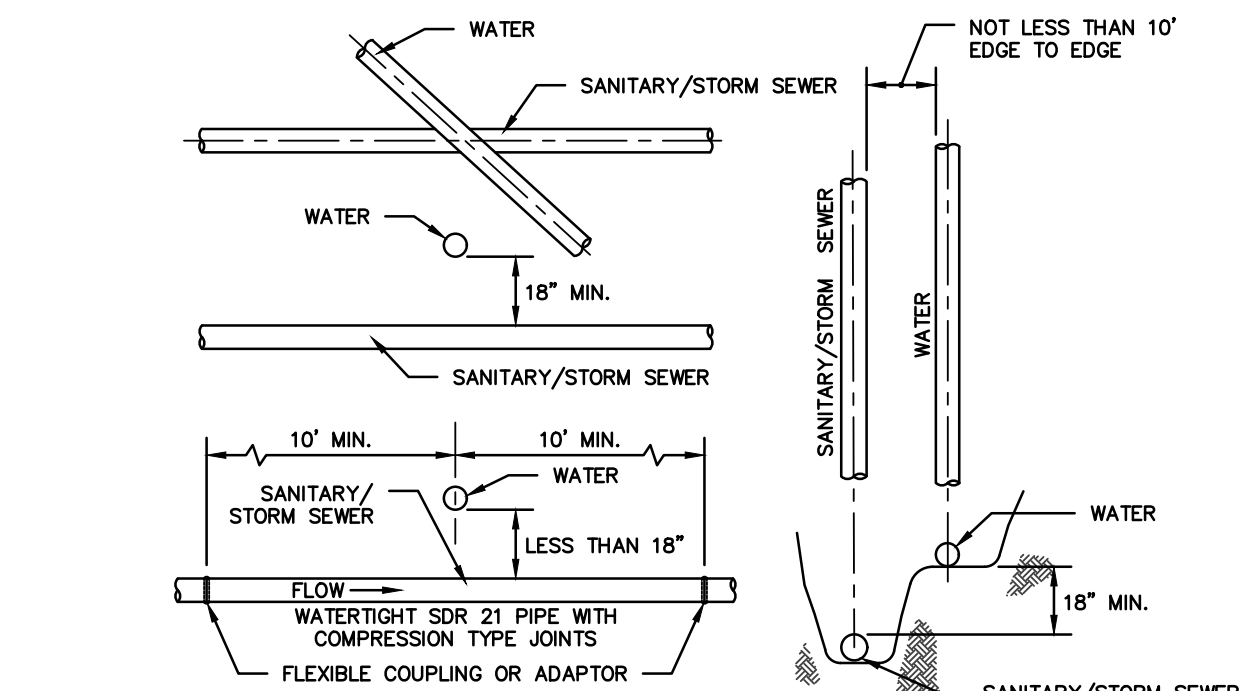


PLASTIC PIPE (PVC & HDPE) BEDDING DETAIL
NOT TO SCALE (REV. 12/17)

LEGEND:
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

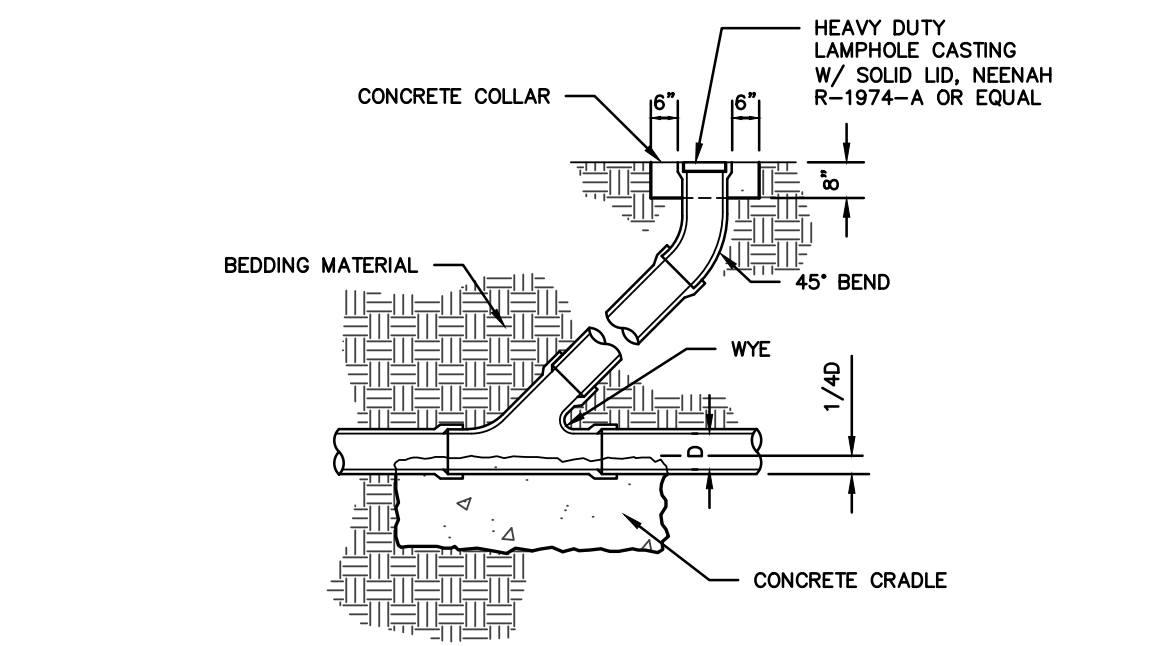
NOTE: ALL INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS. A MINIMUM 9" OF CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.

DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	d (MIN)
27" & SMALLER	4"
30" TO 60"	4"
66" & LARGER	4"



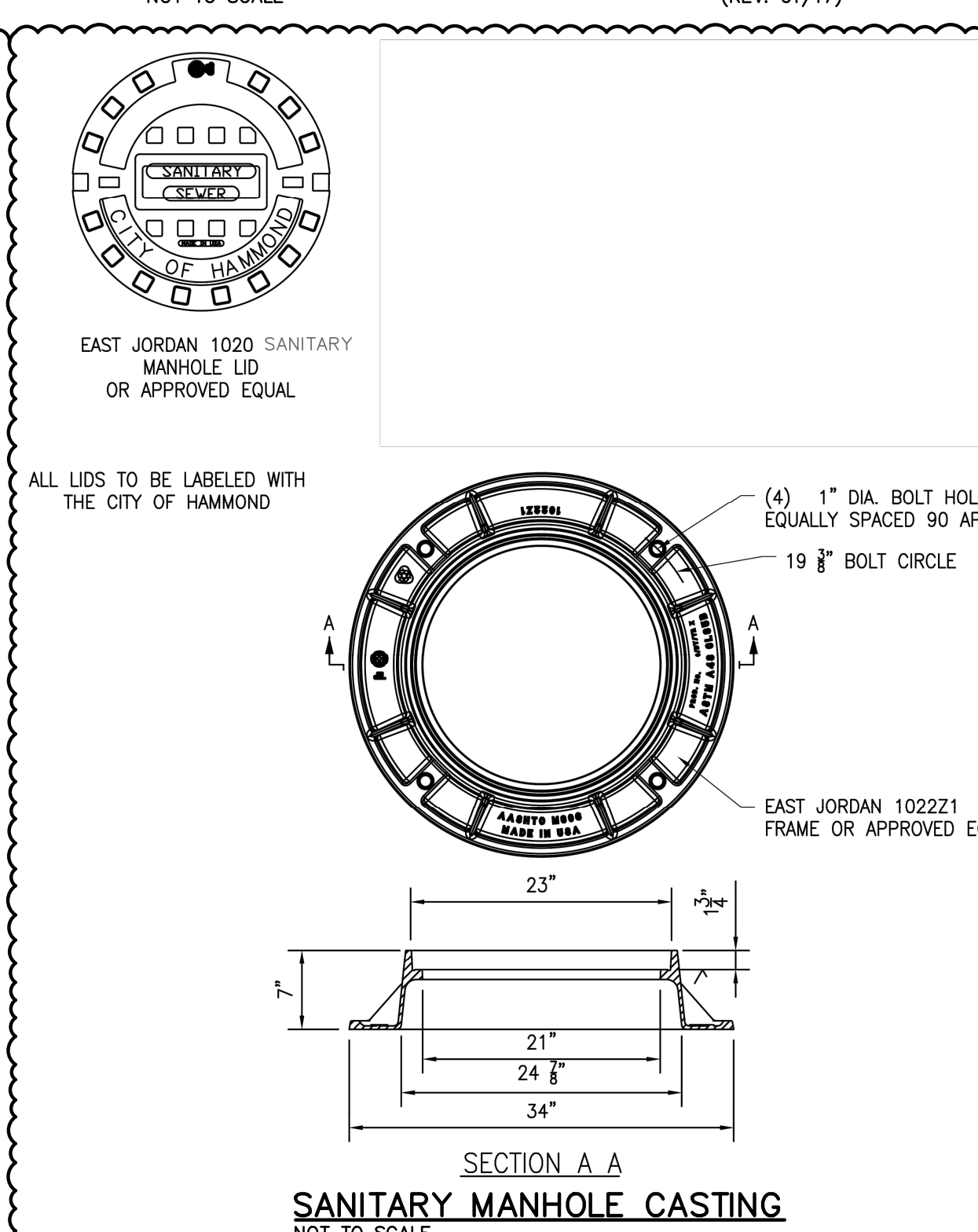
MIN CROSSOVER & SEPARATION REQUIREMENTS FOR WATER & SANITARY/STORM SEWERS
NOT TO SCALE (REV. 01/17)

NOTES:
1. WHEN LATERAL SEPARATION IS 10' OR GREATER NO VERTICAL CLEARANCE IS NEEDED
2. ALL CROSSINGS AND SEPARATIONS TO BE 327 IAC, ARTICLES 3 & 8
3. WHEN HORIZONTAL SEPARATION IS LESS THAN 10' OR VERTICAL SEPARATION IS LESS THAN 18", SANITARY PIPE MUST BE WATERTIGHT SDR 21 WITH COMPRESSION TYPE JOINTS.
4. CONTRACTOR SHALL VERIFY THAT MORE STRINGENT SEPARATION REQUIREMENTS DO NOT EXIST WITH THE JURISDICTIONAL WATER UTILITY. IF THEY DO EXIST, CONTRACTOR SHALL FOLLOW THE MORE STRINGENT REQUIREMENTS.

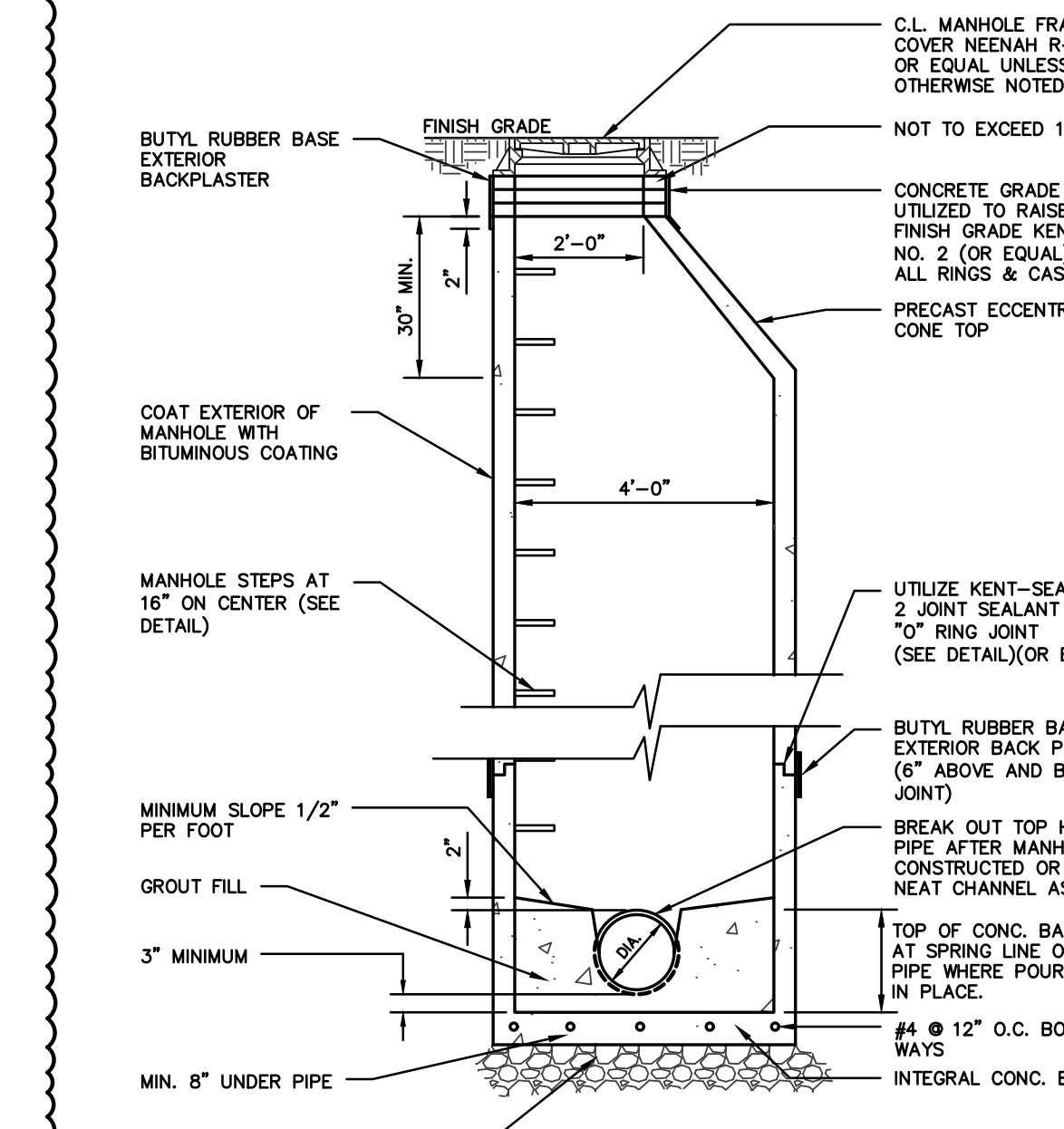


CLEANOUT DETAIL
NOT TO SCALE (REV. 01/17)

NOTE: BEDDING MATERIAL TO BE IN ACCORDANCE WITH PLASTIC PIPE (PVC AND HDPE) BEDDING DETAIL.



SANITARY MANHOLE CASTING
NOT TO SCALE



TYPICAL PRECAST CONCRETE MANHOLE (SANITARY)
NOT TO SCALE (REV. 01/17)

NOTE: PROVIDE A NEOPRENE CONICAL-TYPE FLEXIBLE SEAL FOR ALL PIPE TO MANHOLE CONNECTIONS. SEAL SHALL MEET ASTM C 443



City of Hammond
Mayor Thomas M. McDermott Jr.
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Hammond, IN 46320

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jcrabtree@structurepoint.com

MEMORIAL PARK REDEVELOPMENT

1301 Highland St.
Hammond, Indiana 46320



Joshua H. Crabtree
CERTIFIED BY

ISSUANCE INDEX	
DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

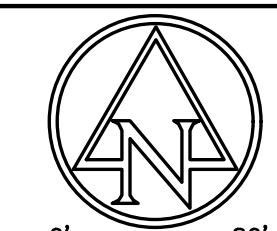
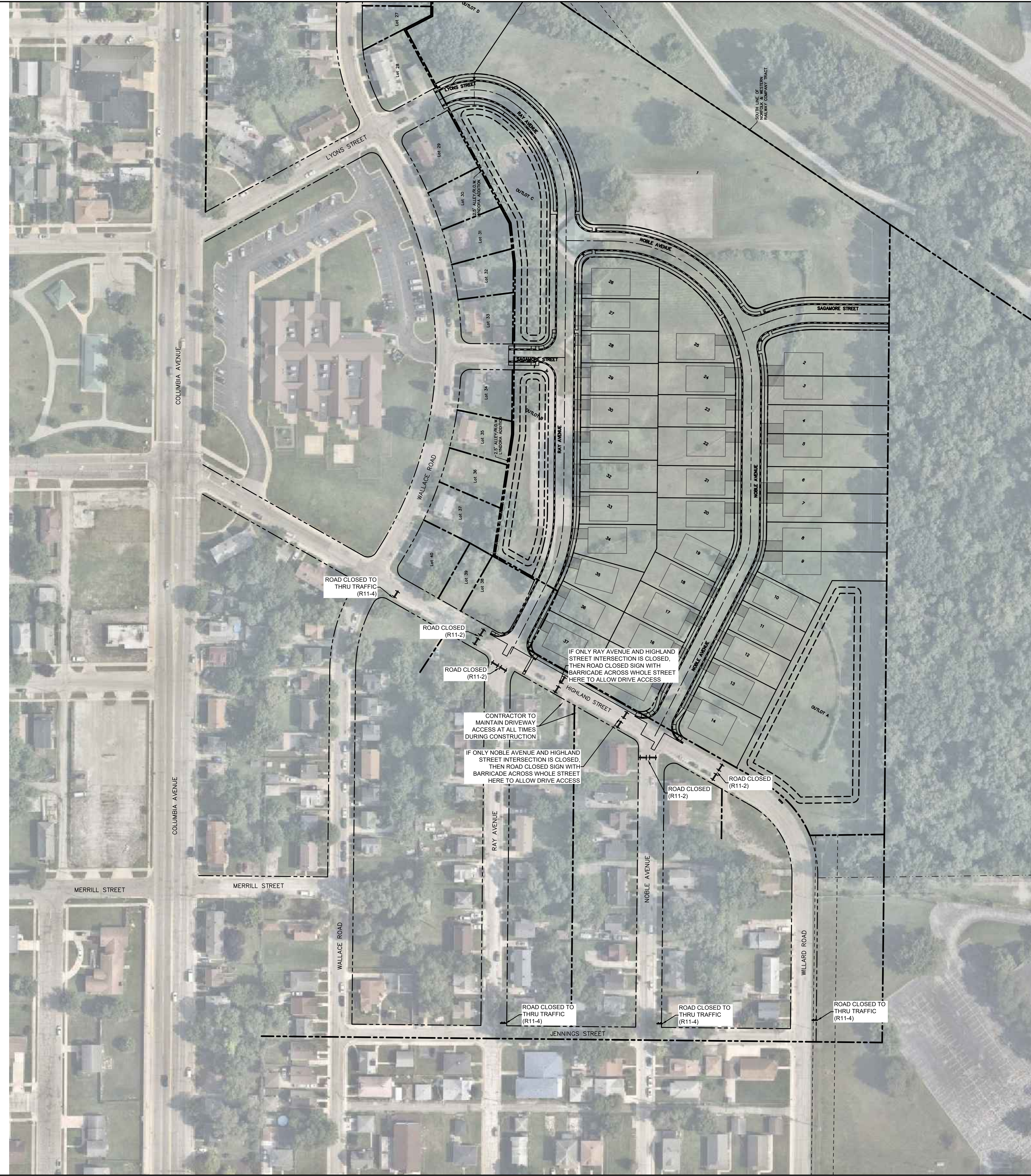
Project Number 2021.03290

SANITARY SEWER DETAILS & SPECIFICATIONS

C630

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 PLOT SCALE: 1:1
 EDIT DATE: 02/17/2024



0' 80' 160'
SCALE: 1"=80'

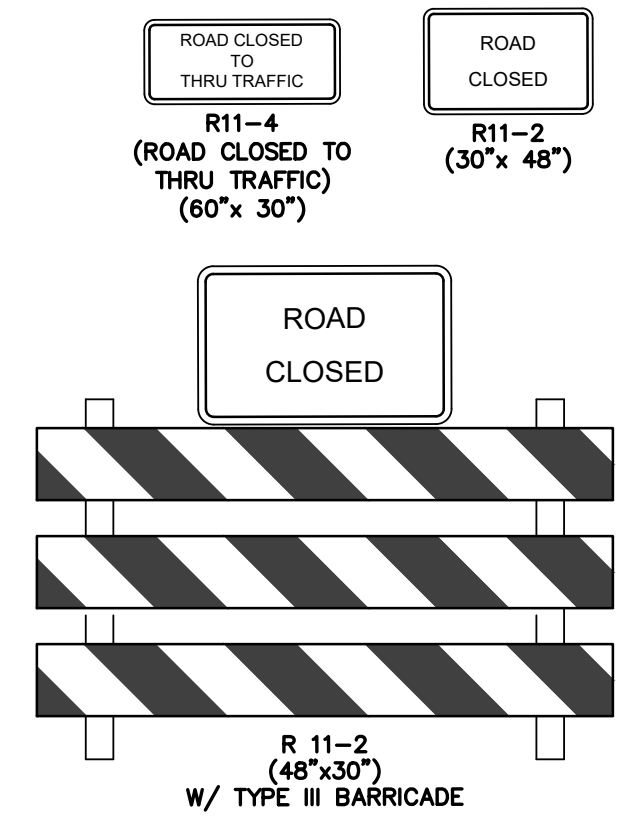
EXISTING LEGEND

- Temporary Bench Mark
- Well
- Combination Pole
- Electric Meter Box
- Electric Box
- Gas Meter
- Gas Marker Sign
- Guy Wire
- Telephone Handhole
- Telephone Marker Sign
- Telephone Pole
- Telephone Pedestal
- Buried Fiber Optic
- Buried Electric Line
- Overhead Electric Line
- Buried Gas Line
- Buried Telephone Line
- Overhead Telephone Line
- Buried Water Line
- Beehive Inlet
- Curb Inlet
- Fire Hydrant
- Clean Out
- Tree
- Bush
- Stump
- Spigot
- Mailbox
- Pine
- Post
- Power Pole
- Sign
- Stand Pipe
- Existing Pond

PROPOSED LEGEND

- RIGHT-OF-WAY (R/W) LINE
- BUILDING SETBACK LINE
- EASEMENT
- WET DETENTION POND NORMAL POOL
- LOT LINE
- WATER MAIN
- W
- SS
- SS
- SS
- SS
- 6" DOUBLE-WALL PERFORATED SUBSURFACE UNDERDRAIN (SWALE/CURB)
- STORM SEWER
- OHE
- OHE
- FIRE HYDRANT & WATER VALVE
- WATER TEE, CROSS & BEND
- SQUARE FEET
- B.S.L. BUILDING SETBACK LINE
- B/B BACK TO BACK
- D.E. DRAINAGE EASEMENT
- D.&U.E. DRAINAGE & UTILITY EASEMENT
- INV INVERT ELEVATION
- PVC POLYVINYL CHLORIDE PIPE
- R/W RIGHT-OF-WAY
- TR TOP OF RIM ELEVATION
- TR SIGN/STREET LIGHT/UTILITY POLE

NOTE: NOT TO BE FOLLOWED FOR ALL WORK WITHIN HIGHLAND AVENUE.



GENERAL NOTES:

- CONTRACTOR SHALL PROTECT & NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
- CONTRACTOR TO VERIFY LOCATION, SIZE & DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.
- SEE SHEET C002 GENERAL NOTES FOR MORE INFORMATION.

!! CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

CALL TOLL FREE "811" OR 1-800-382-5544
INDIANA UNDERGROUND

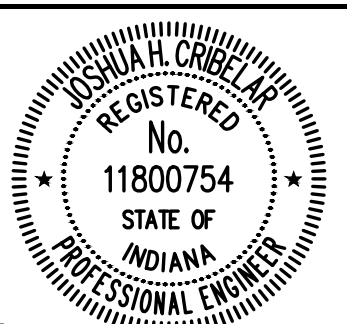


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MEMORIAL PARK REDEVELOPMENT

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 Hammond, Indiana 46320



Joshua H. Crislar
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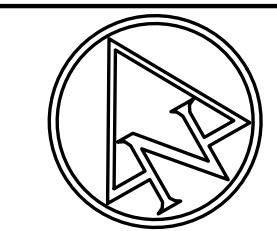
ISSUANCE INDEX	
DATE:	11/14/2024
PROJECT PHASE:	CONSTRUCTION DOCUMENTS

REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

MAINTENANCE OF TRAFFIC PLAN

C700



City of Hammond
 Mayor Thomas M.
 McDermott Jr.
 5925 Calumet Avenue
 Hammond, IN 46320



PLANT SCHEDULE

CODE	QTY	REMARKS	BOTANICAL / COMMON NAME	COND.	SIZE	SPACING
TREES						
PXA	34		Platanus x acerifolia / London Plane Tree	B & B	2.5" Cal.	As shown
CANOPY TREE						
GTS	26		Gleditsia triacanthos 'Skyline' / Skyline Honey Locust	B & B	2.5" Cal.	As shown
GDE	27		Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	B & B	2.5" Cal.	As shown

PLANTING ORDINANCE TABLE

12.4.B.5 REQUIREMENTS		MIXING PLANT SPECIES	
PLANT TYPE	ITEM	TOTAL NUMBER OF PLANTS	MAX. PLANT COUNT PER SPECIES
TREES	MINIMUM 4 SPECIES, MAXIMUM 30% PER SPECIES	XXX	XXX
SHRUBS	MINIMUM 4 SPECIES, MAXIMUM 30% PER SPECIES	XXX	XXX
12.5 REQUIREMENTS			
PARKING LOT LANDSCAPING			
INTERIOR LANDSCAPE			
CLASS D INTERIOR LOT REQUIREMENTS - MINIMUM 11% LANDSCAPED AREA			
12.5.C.d - One hundred (100) percent of every parking lot island or peninsula outside of shrub masses shall be planted in turf or other approved groundcover in the appropriate density to achieve complete cover within (2) years as determined by the approved landscape plan.			
PERIMETER LANDSCAPE			
Parking lots adjacent to or abutting public streets, private streets, front yards, or abutting residential uses/zone districts: 20' width; 2 staggered canopy trees + 33 staggered shrubs per 100 LF			
PERIMETER LENGTH	REQUIRED	PROVIDED	
244 LF	5 CANOPY TREES 41 SHRUBS	5 CANOPY TREES 41 SHRUBS	
442 LF	9 CANOPY TREES 146 SHRUBS	9 CANOPY TREES 146 SHRUBS	
505 LF	10 CANOPY TREES 147 SHRUBS	10 CANOPY TREES 147 SHRUBS	
TABLE 12.0.6 REQUIREMENTS			
ITEM	REQUIRED	PROVIDED	
MIN. 10' WIDE LANDSCAPE BED: 3 UNDERSTORY TREES + 33 SHRUBS PER 100 LF	46 UNDERSTORY TREES 506 SHRUBS	47 UNDERSTORY TREES 506 SHRUBS	
TABLE 12.0.7.E REQUIREMENTS			
ITEM	REQUIRED	PROVIDED	
MIN. 40' WIDE LANDSCAPE AREA: 2 STAGGERED EVERGREEN TREES: 1 CANOPY TREE + 33 SHRUBS PER 100 LF			

REFERENCE NOTES

- Contractor to verify all utility locations in the field prior to beginning work and is responsible for any damage to utilities associated with work. Utilities shall be repaired to satisfaction of the utility owner and/or operating authority at no additional cost.
- In case of discrepancies between the plan and the plant list, the plan shall dictate. Dimensioned details take precedence over scaled details. If in question, contact the landscape architect.
- No substitutions of plant material will be allowed. If plants are shown to be unavailable, the contractor shall notify landscape architect prior to bid date in writing. All plants shall be inspected and tagged with project identification at nursery or contractor's operation prior to moving to job site. Plants may also be inspected and approved or rejected on the job site.
- All disturbed lawn areas shall be seeded or sodded as shown on plans. Refer to erosion control plans for temporary seeding and areas not shown on landscape plans.

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REVISION SCHEDULE		
NO.	DESCRIPTION	DATE
1	ADDENDUM #2	12/05/24

Project Number 2021.03290

LANDSCAPE PLAN

L100



PLOT DATE: 12/20/24 4:42 PM
 PLOT SCALE: 1:1
 EDIT DATE: 01/16/2024
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