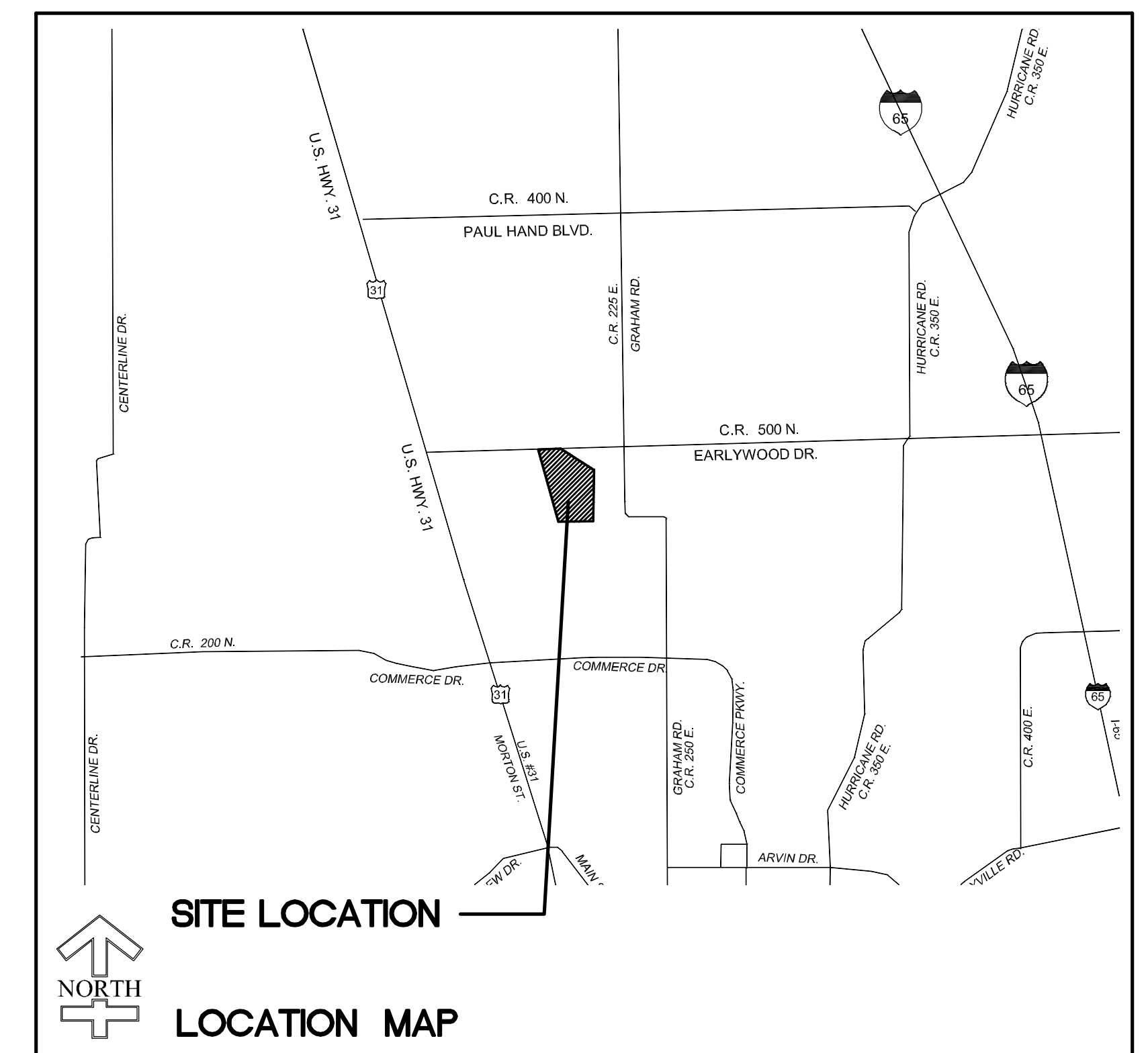
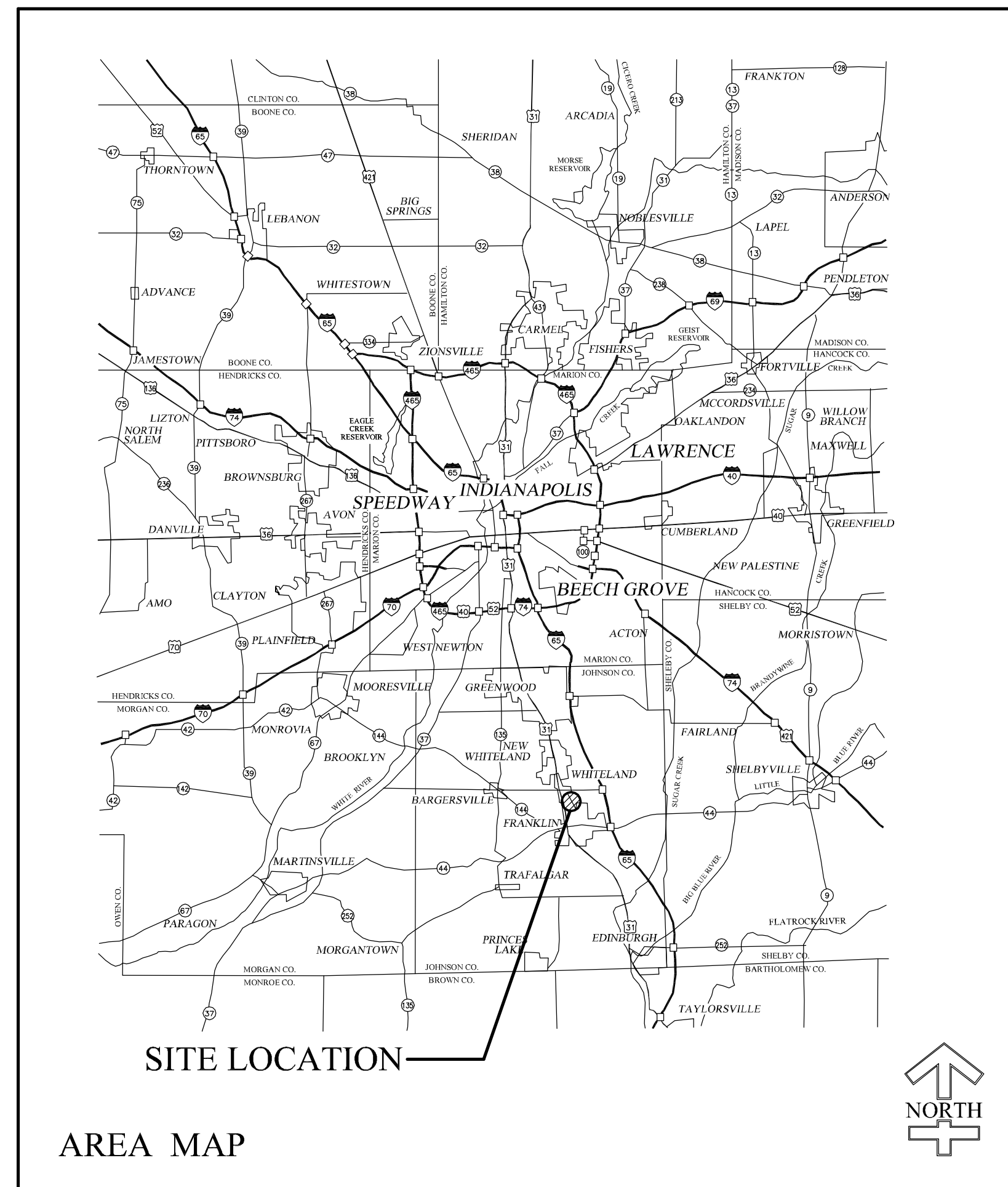


CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA CONSTRUCTION PLANS

PREPARED FOR:
LAUGLE PROPERTIES
4145 WHITETAIL WOODS,
BARGERSVILLE, IN 46106
PHONE: 317-738-5966
JACK LAUGLE



SITE ADDRESS: 2035 EARLYWOOD DR.
FRANKLIN, IN 46131

[illegible]

INDEX OF DRAWINGS	
SHEET NO.	DESCRIPTION
C101	TITLE SHEET
C201	EXISTING SITE CONDITIONS
C301	PROPOSED SITE CONDITIONS (DIMENSIONAL PLAN)
C302	PROPOSED SITE CONDITIONS (GEOMETRIC PLAN)
C303	PROPOSED SITE CONDITIONS (GRADING PLAN)
C401	STORM WATER POLLUTION PREVENTION PLAN (INITIAL PRE CONSTR.)
C402	STORM WATER POLLUTION PREVENTION PLAN (CONSTRUCTION/GRADING PHASE)
C403	STORM WATER POLLUTION PREVENTION PLAN (POST CONSTR.)
C501	UTILITY PLAN
C502	WATER DISTRIBUTION PLAN
C503	STORM SEWER PLAN AND PROFILES
C504	SANITARY SEWER PLAN AND PROFILE
C601	LANDSCAPE PLAN
C701-703	SITE DETAILS
C704	SANITARY SEWER DETAILS
C705	WATER DETAILS
C801-802	STORM WATER POLLUTION PREVENTION PLAN DETAILS
C901	SPECIFICATIONS
C902	WATER SPECIFICATIONS

DATES:

EST. PROPOSED START DATE: SPRING 2023
EST. COMPLETION DATE: FALL 2023

USE:

PROPOSED USE: INDUSTRIAL: GENERAL
EXISTING ZONING: IG

UTILITY CONTACT INFORMATION

SANITARY SEWERS
FRANKLIN PUBLIC WORKS
796 SOUTH STATE ST.
FRANKLIN, IN 46131
PHONE #: (317) 736-3640
CONTACT: SALLY BROWN
SBROWN@FRANKLIN.IN.GOV

TELEPHONE
CENTURYLINK
1147 NORTH MORTON STREET
FRANKLIN, IN 46131
PHONE #: (317) 736-4863
CONTACT: JOHN C. UNVERFERT
JOHN.C.UNVERFERT@CENTURYLINK.COM

WATER
INDIANA—AMERICAN WATER CO.
153 N. EMERSON AVE.
GREENWOOD, IN 46143
PHONE #: (317) 893-3560
CONTACT: TRACY WHITE
TRACY.WHITE@AMWATER.COM

ELECTRIC
DUKE ENERGY
2515 N. MORTON ST.
FRANKLIN, IN 46131
PHONE #: (317) 736-2014
CONTACT: REECE HEILERS
REECE.HEILERS@DUKE-ENERGY.COM

TELEPHONE
METRONET
111 COMMERCE DRIVE
FRANKLIN, IN 46131
PHONE #: (317) 465-1046
CONTACT: CHRISTOPHER BLUTO
CHRISTOPHER.BLUTO@METRONETINC.COM

CABLE
COMCAST
1600 WEST VERNAL PIKE
BLOOMINGTON IN 47404
PHONE #: (812) 355-7822
CONTACT: STEVE MCARTOR
STEVE_MCARTOR@CABLE.COMCAST.COM

GAS
CENTERPOINT ENERGY
600 INDUSTRIAL DRIVE
FRANKLIN, IN 46131
PHONE #: (317) 736.2915
CONTACT: KIMBERLY KELLY
KIM.KELLY@CENTERPOINTENERGY.COM

LEGAL DESCRIPTION

A PART OF THE NORTHWEST QUARTER OF SECTION 2 AND PART OF THE NORTHEAST QUARTER OF SECTION 3, ALL IN TOWNSHIP 12 NORTH, RANGE 4 EAST OF THE SECOND PRINCIPAL MERIDIAN. DESCRIBED AS FOLLOWS:

LOT NUMBERED 2 IN PATRIOT DEFENSE RESEARCH PARK A SUBDIVISION TO THE CITY OF FRANKLIN AS RECORDED IN PLAT CABINET E, PAGE 572A-C AND INSTRUMENT NUMBER 22-015414 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA.

FLOOD_ZONE_DESIGNATION

A MAJORITY OF THE SITE LIES IN FLOOD HAZARD ZONE X (AREA OUTSIDE 500 YR. FLOODPLAIN), SHADED ZONE X (AREA OF 500 YR. FLOODPLAIN) AND ZONE 'AE' (AREA OF 100 YR. FLOODPLAIN, STUDIED) AS SCALE FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, INDIANA, COMMUNITY NUMBER, 18081, PANEL NUMBER 0139 E, DATED 1/29/21

BENCHMARKS:

SITE ELEVATIONS ARE BASED ON GPS GEOID "G2012bu7" USING A PROJECTION OF "INDIANA EAST" AND DATUM NAD83 NO TRANS.

ONSITE BENCHMARK - ELEVATION 756.66 (NAVD 1983)
TOP OF SANITARY SEWER MANHOLE CASTING 362' WEST AND 38' NORTH OF
INTERSECTION OF EARLYWOOD DRIVE (CO. RD. 300 N.) AND ESSEX DR.

CERTIFIED BY:

Jeffery K. Smith 5/3/13
JEFFERY K. SMITH
REGISTERED ENGINEER NO. 19419
STATE OF INDIANA




PREPARED BY:
PROJECTS *plus*
GREENWOOD SURVEYING COMPANY

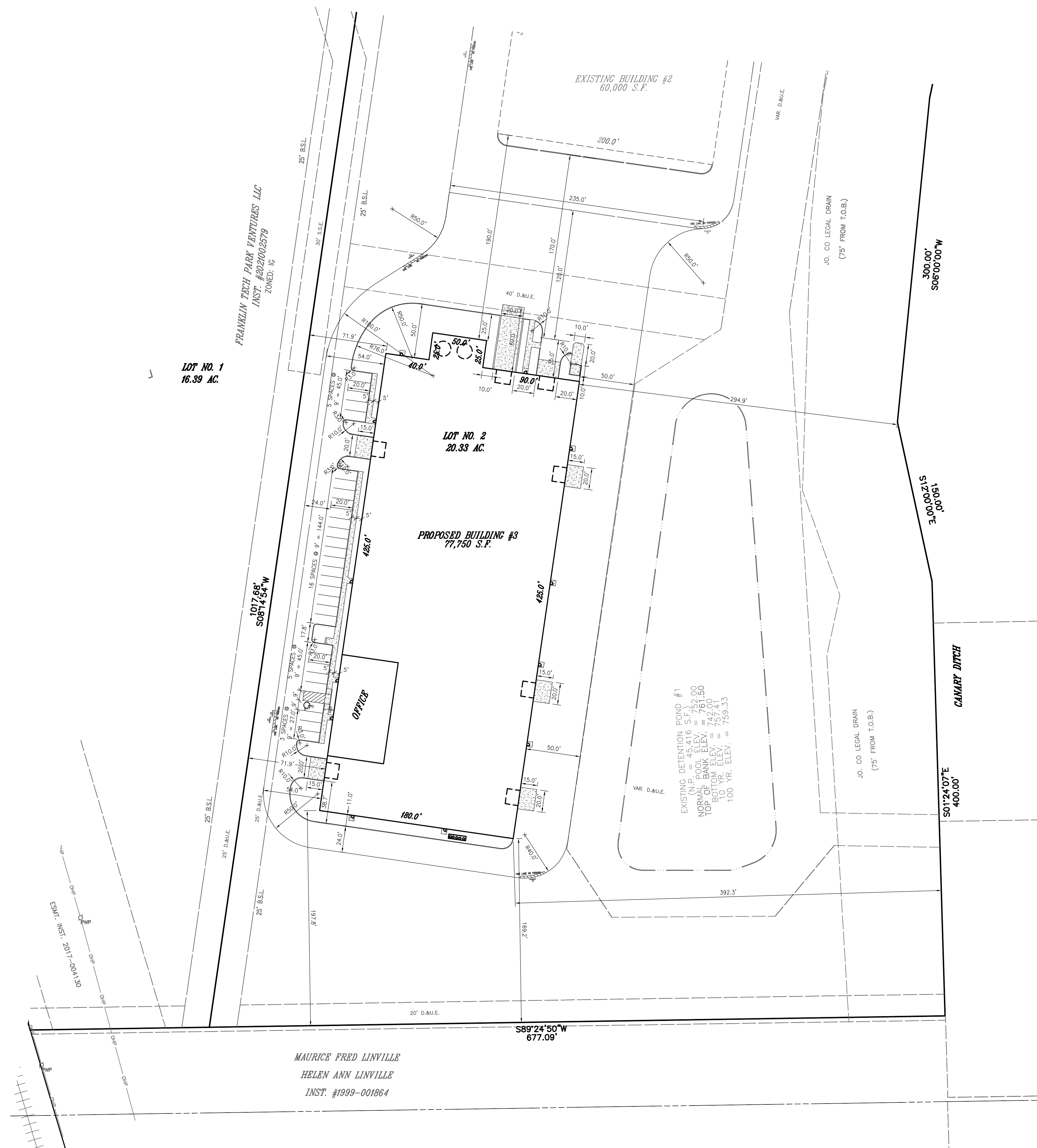
SITE ENGINEERING—LAND SURVEYING—CONSTRUCTION LAYOUT
1257 Airport Parkway Suite A - Greenwood, Indiana 46143
(317)-882-5003

SHEET **C101**
JOB # 21008.01



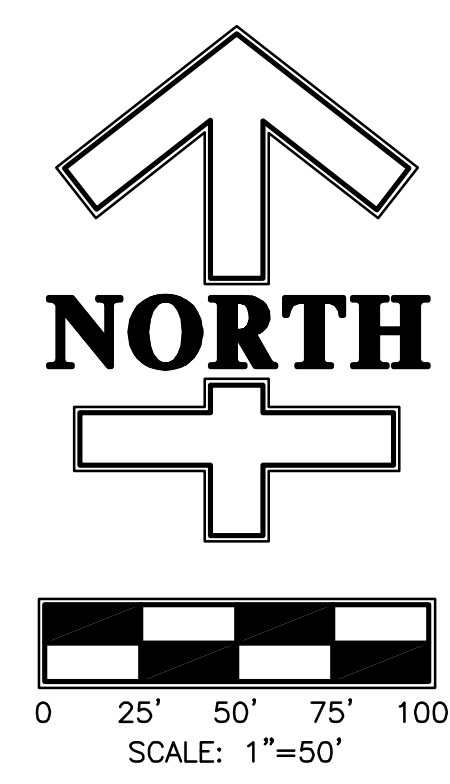
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PROJECTS <i>plus</i> GREENWOOD SURVEYING COMPANY SITE ENGINEERING—LAND SURVEYING—CONSTRUCTION LAYOUT 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143 (317)---882---5003		SEAL  <i>Jeffery K. Smith</i> 5/13/23		DATE MAY 3, 2023	
JOB NUMBER 21008.01		SHEET C201		DATE MAY 3, 2023	
PROJECT LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA		TITLE EXISTING SITE CONDITIONS		SCALE 1"=50'	
CHECKED JPH		CHECKED JKS		SYMBOL	
DRAWN JPH		DRAWN JKS		REVISION	
DATE 5/13/23		DATE 5/13/23		DATE	



LEGEND :
B.S.L. BUILDING SETBACK LINE

- GENERAL NOTES:
1. CONTRACTOR SHALL RECOGNIZE RESPECTIVE WORK AND RESPONSIBILITY TO VERIFY LOCATION, SIZE, AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, PIPES, PAVEMENTS, ETC. AS RELATED TO THEIR WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSOIL CONDITIONS.
 3. ALL PAVEMENT PATCHING DUE TO UTILITIES INSTALLATION, CONSTRUCTION OF CURBS, ETC., OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS THE EXISTING SECTION BY THE CONTRACTOR DOING THE WORK.
 4. ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
 5. ALL TRAFFIC CONTROL SIGNAGE AND DEVICES SHALL MEET MOST CURRENT I.M.U.C.T.D. STANDARDS.
 6. ALL DIMENSIONS ARE TO FACE OF CURB, UNLESS NOTED.



- NOTICES AND PERMITS
1. THE CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
 3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.

DATE	REVISION	SYMBOL	SCALE	PROJECT	TITLE
			1"=50'	LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2	PROPOSED SITE CONDITIONS (DIMENSIONAL PLAN)
			DRAWN	JPH	
			CHECKED	JKS	
			CERTIFIED	JKS	

PROJECTS plus

GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
(317)-882-5003

SEAL

JEFFERY K. SMITH
REGISTERED
No. 19419
STATE OF INDIANA
PROFESSIONAL ENGINEER

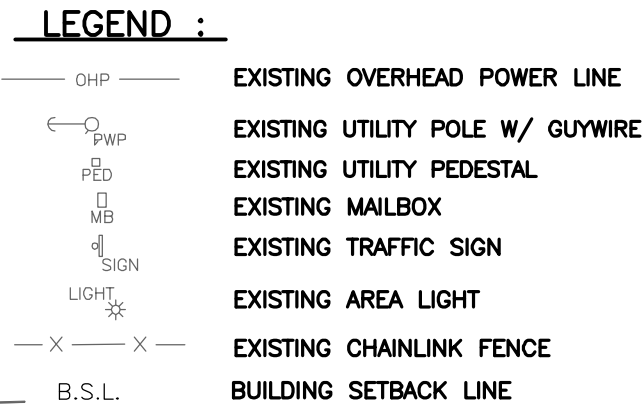
Jeffery K. Smith
5/13/23

JOB NUMBER
21008.01

SHEET

C301

DATE
MAY 3, 2023



- | | |
|----|---|
| A | 4" BITUMINOUS OVER 9" STONE BASE (HEAVY DUTY SECTION) |
| B | 6" EXTRUDED CONCRETE CURB |
| B1 | MONOLITHIC CONCRETE CURB (6") WITH SIDEWALK |
| C1 | 4" CONCRETE SIDEWALK OVER COMPACTED SUBGRADE |
| C2 | 7" CONCRETE SIDEWALK OVER 4" COMPACTED SUBGRADE |
| D | 4" WHITE PAVEMENT STRIPING |
| D2 | BLUE 'ADA' HANDICAP PARKING STRIPING |
| D3 | WHITE "NO PARKING FIRE LANE" STRIPING |
| E | 'ADA' HANDICAP SIDEWALK RAMP |
| F1 | 'ADA' "HANDICAP PARKING ONLY" SIGN ON SQUARE POST |
| F2 | "NO PARKING FIRE LANE TOW AWAY" SIGN OF SQUARE POST |
| F3 | "F.D.C. CONNECTION" SIGN OF SQUARE POST |
| G | BICYCLE RACK, FOR A MINIMUM OF FOUR BICYCLES |
| H | LANDSCAPING AND LAWN |
| I | DUMPSITE ENCLOSURE AND APRON - 7" CLASS 'A' CONCRETE OVER 4" COMPACTED STONE BASE W/ 6" TALL WOOD PRUNAGE DESIGN AND GATE |
| J | RETAINING WALL (DESIGN BY OTHERS) |

☐ Z EXISTING ASPHALT TO BE PROTECTED

1. CONTRACTOR SHALL RECOGNIZE RESPECTIVE WORK AND RESPONSIBILITY FOR THE CONSTRUCTION OF THE EXISTING AND EXISTING UTILITY STRUCTURES, PIPES, PAVEMENTS AND/OR RELATED TO THE WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSIDIARY CONDITIONS.
3. THE PLANS SHOW THE LOCATION OF ALL KNOWN UTILITIES LOCATED WITHIN THE CONTRACT. ACCORDING TO INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES, PREVIOUS CONSTRUCTION PROJECTS AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
4. CONTRACTORS SHALL CONSULT ARCHITECTURAL, PLUMBING AND ELECTRICAL PLANS FOR: INSERT ELEVATIONS AND EXACT LOCATION OF WATER LINES GAS LINES, TRANSFORMER'S PAD OR POLE, AND BUILDING DIMENSIONS.
5. ALL PAVEMENT PATCHING DUE TO UTILITIES INSTALLATION/ CONSTRUCTION OF CURBS, ETC., OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS THE REGION COUNTY STANDARDS AS APPROVED BY THE ENGINEERING DEPARTMENT.
6. ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
7. ALL EXISTING MANHOLE AND CATCH BASIN GRATES, WATER OR GAS VALVES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION.
8. ALL PIPE LENGTHS SHOWN ON DRAWINGS ARE FOR HYDRAULIC CALCULATION PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE EXACT LENGTHS REQUIRED FOR ACTUAL INSTALLATION.
9. CONSTRUCTION OF ALL SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODE, RULES AND REGULATIONS.
10. WHERE WATER LINES AND SEWERS CROSS AND THE WATER LINE CANNOT BE PLACED ABOVE OR BELOW THE SEWER WITH A MINIMUM OF 18" VERTICAL CLEARANCE, THE SEWER SHALL BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS WITHIN 10' OF THE WATER LINE.
11. WHERE WATER LINES AND SEWERS RUN PARALLEL, AND A MINIMUMUM OF 10' SEPARATION IS NOT MAINTAINED, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS.
12. ANY FIELD TIES ENCOUNTERED DURING THE COURSE OF CONSTRUCTION SHALL BE PERPETUATED IN COMPLIANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.
13. ALL STORM CISTINGS ARE TO BE OF THE "ENVIRONMENTAL" TYPE AND EMBOSSED WITH THE APPROPRIATE LANGUAGE AND SYMBOLS. USE NPDES PHASE II COMPLIANT CISTINGS (DUMP NO WASTE; DRAINS TO RIVER) WHERE AVAILABLE.
14. DIMENSIONS TO FACE OF CURB.
15. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED CONCRETE SIDEWALK OR CONCRETE CURB DISTRIBUTED BY CONSTRUCTION.

1. THE CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
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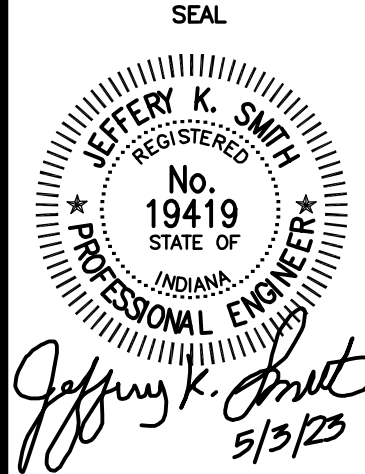


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PROJECTS *plus*

GREENWOOD SURVEYING COMPANY

SITE, ENGINEERING—AND SURVEYING—CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A — Greenwood, Indiana 46143
(317)—882—5003



JOB NUMBER
21008.01
SHEET

C302

DATE
MAY 3, 2023



- GENERAL NOTES:**
- CONTRACTOR SHALL RECOGNIZE RESPECTIVE WORK AND RESPONSIBILITY TO VERIFY LOCATION, SIZE, AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, PIPES, PAVEMENTS, ETC. AS RELATED TO THEIR WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSOIL CONDITIONS.
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 - CONTRACTORS SHALL CONSULT ARCHITECTURAL, PLUMBING AND ELECTRICAL PLANS FOR: INVERT ELEVATIONS AND EXACT LOCATION OF DOWNSPOUTS, WATER LINES GAS LINES, TRANSFORMER'S PAD OR POLE, AND BUILDING DIMENSIONS.
 - ALL PAVEMENT PATCHING DUE TO UTILITIES INSTALLATION; CONSTRUCTION OF CURBS, ETC., OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS JOHNSON COUNTY STANDARDS AS APPROVED BY THE ENGINEERING DEPARTMENT.
 - ALL GRASS AND/OR SHRUBBERY DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
 - ALL EXISTING MANHOLE AND CATCH BASIN GRATES, WATER OR GAS VALVES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION
 - ALL PIPE LENGTHS SHOWN ON DRAWINGS ARE FOR HYDRAULIC CALCULATION PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE EXACT LENGTHS REQUIRED FOR ACTUAL INSTALLATION.
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 - WHERE WATER LINES AND SEWERS RUN PARALLEL AND A MINIMUM SEPARATION DISTANCE OF 10' CANNOT BE MAINTAINED, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS.
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LEGAL DRAINAGE EASEMENT NOTE:
NO STRUCTURES OR IMPROVEMENTS SHALL BE PERMITTED WITHIN THE LEGAL DRAIN EASEMENTS, ALL UTILITIES, BUILDINGS, PLANTINGS, CROPS, TREES, SHRUBS, AND WOODY VEGETATION GROWN WITHIN THE EASEMENT, OR LEGAL DRAIN ARE AT THE RISK OF OWNER AND SUBJECT TO REMOVAL WITHOUT RESTITUTION (I.C. 36-9-27-33).

- LEGEND :**
- PROPOSED STORM SEWER W/ END SECTION, MANHOLE, DITCH INLET AND PAVEMENT INLET
 - PROPOSED SANITARY SEWER W/ MANHOLE
 - PROPOSED 6" PVC UNDERDRAIN STRUCTURE NUMBER
 - PROPOSED FLOWLINE
 - PROPOSED FLOW DIRECTION
 - PROPOSED SPOT ELEVATION
 - MATCH EXISTING GRADE
 - PROPOSED CONTOUR LINE
 - EXISTING SANITARY SEWER W/ MANHOLE
 - EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET
 - EXISTING BURIED GAS MAIN W/ METER AND VALVE
 - EXISTING BURIED ELECTRIC CABLE W/ MANHOLE
 - EXISTING OVERHEAD POWER LINE
 - EXISTING UTILITY POLE W/ GUYWIRE
 - EXISTING UTILITY PEDESTAL
 - EXISTING MAILBOX
 - EXISTING TRAFFIC SIGN
 - EXISTING AREA LIGHT
 - EXISTING CHAINLINK FENCE
 - EXISTING CONTOUR LINE
 - B.S.L.
 - R/W
 - RIGHT-OF-WAY

FLOOD ZONE DESIGNATION
A MAJORITY OF THE SITE LIES IN FLOOD HAZARD ZONE X (AREA OUTSIDE 500 YR. FLOODPLAIN), SHADED ZONE X (AREA OF 500 YR. FLOODPLAIN) AND ZONE 'AE' (AREA OF 100 YR. FLOODPLAIN, STUDIED) AS SCALE FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, INDIANA, COMMUNITY NUMBER, 18081, PANEL NUMBER, 0139 E, DATED 1/29/21

BENCHMARKS:
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ONSITE BENCHMARK - ELEVATION 756.66 (NAVD 1983)
TOP OF SANITARY SEWER MANHOLE CASTING 362' WEST AND 38' NORTH OF INTERSECTION OF EARLYWOOD DRIVE (CO. RD. 300 N.) AND ESSEX DR.

811
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ITS THE LAW
CALL 2 HOURS BEFORE YOU DIG
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DATE		REVISION		SYMBOL		SCALE		PROJECT		TITLE	
						1"=50'		LAUGLE BUILDING #2 AT PATRIOT	DEFENSE RESEARCH PARK - LOT #2	CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA	PROPOSED SITE CONDITIONS (GRADING PLAN)
						DRAWN	JPH	CHECKED	JKS	CERTIFIED	JKS
PROJECTS plus GREENWOOD SURVEYING COMPANY SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143 (317)-882-5003											
SEAL JEFFERY K. SMITH REGISTERED No. 19419 STATE OF INDIANA <i>Jeffery K. Smith</i> 5/3/23											
JOB NUMBER 21008.01 SHEET											
C303											
DATE MAY 3, 2023											

INDEX OF REQUIRED INFORMATION FOR CONSTRUCTION
STORM WATER POLLUTION PREVENTION FOR
PATRIOT DEFENSE RESEARCH PARK — BUILDINGS #1 AND #2

EROSION CONTROL PLAN INDEX					
A1.	ELEMENT	SHEET	ELEMENT	SHEET	ELEMENT
A1	C401-C406	A12	N/A	A23	C305-C306
A2	ATTACHED	A13	C401-C406	B11	C401-C406.C1102
A3	C401-C406	A14	C401-C406	B12	C401-C406.C1101
A4	C101	A15	C401-C406	B2	C401-C406.C1101
A5	C101	A16	C401-C406	B3	C401-C406.C1103
A6	C301-C306	A17	C201-C202	B4	C401-C406.C1101
A7	C401-C406	A18	C1101	B5	C401-C406.C1102
A8	N/A	A19	C701-C706	B6	C401-C406.C1102
A9	C401-C406	A20	N/A	B7	C401-C406.C1102
A10	C201	A21	C403-C404	B8	C401-C406.C1102
A11	C401-C406	A22	C201-C202	B9	N/A

- A2. INCLUDED IN SUBMITTAL PACKET
- A3. PATRIOT DEFENSE RESEARCH PARK — BUILDINGS #1 AND #2 IS LOCATED OFF EARLYWOOD DR., FRANKLIN, IN 46131 AT THE INTERSECTION OF EARLYWOOD DR. AND ESSEX DR. THE SITE IS A PROPOSED INDUSTRIAL DEVELOPMENT ON 36.74 ACRES. IMPROVEMENTS SHALL CONSIST OF CONSTRUCTION OF A TWO INDUSTRIAL BUILDING, STORM SEWER, SWALES, ASPHALT PAVEMENT, CONCRETE CURBS, CONCRETE WALKS, DETENTION POND AND EARTH WORK.
- A4. VICINITY MAP ON TITLE SHEET — SEE SHEET C101
- A5. LEGAL DESCRIPTION — PART OF THE NW 1/4 SECTION 2 AND NE 1/4 SECTION 3, TOWNSHIP 12 NORTH, RANGE 4 EAST
LATITUDE: N39°31'06" LONGITUDE: W87°03'50"
- A6. LOTS AND IMPROVEMENTS SHOWN ON PROPOSED SITE CONDITIONS — SEE SHEET(S) C301-C306
- A7. HYDROLOGIC UNIT CODE: 0512020409030
- A8. NO STATE OR FEDERAL WATER QUALITY PERMITS ARE REQUIRED FOR THIS PROJECT.
- A9. THE STORM WATER WILL DISCHARGE TO A PROPOSED DETENTION POND LOCATED ALONG THE SOUTH SIDE OF THE PROJECT SITE AND THEN THE OUTLET ALONG THE SOUTH PROPERTY LINE, MAINTAINING THE CURRENT RELEASE POINT. DISCHARGE ULTIMATELY RELEASE TO THE CANARY DITCH.
- A10. NO WETLANDS EXIST ON THE PROPOSED CONSTRUCTION SITE.
- A11. RECEIVING WATERS: CANARY DITCH
- A12. WE ANTICIPATE NO POTENTIAL AREAS WERE DISCHARGE WILL ENTER GROUNDWATER.
- A13. 100 YEAR FLOOD PLAINS, FLOODWAYS AND FLOODWAY FRINGES ARE SHOWN ON THE EXISTING SITE CONDITION PLAN(S) — SEE SHEET(S) C201-C202
- A14. PRE-CONSTRUCTION 10 YEAR OUTFLOW = 7.29 C.F.S.
POST-CONST. 10 YEAR OUTFLOW = 2.16 C.F.S.
- A15. LAND USE OF ADJACENT PROPERTIES:
NORTH: INDUSTRIAL
WEST: INDUSTRIAL
SOUTH: INDUSTRIAL
EAST: INDUSTRIAL
- A16. BOUNDARY OF DISTURBED AREA SHOWN ON STORM WATER POLLUTION PREVENTION PLAN(S) — SEE SHEET(S) C401-C406
- A17. EXISTING SITE CURRENTLY BARE WITH GRASSES AS SHOWN ON THE EXISTING SITE CONDITION PLAN — SEE SHEET(S) C201-C202
- A18. SOIL MAP LOCATED ON THE STORM WATER POLLUTION PREVENTION DETAIL SHEET — SEE SHEET C801
- A19. LOCATION, SIZE AND DIMENSIONS OF STORM WATER SYSTEMS SHOWN ON STORM PLAN AND PROFILE SHEET(S) — SEE SHEET(S) C503-C504
- A20. NO OFFSITE CONSTRUCTION ACTIVITIES WILL BE NECESSARY.
- A21. SOIL STOCKPILE, BORROW AND DISPOSAL AREAS ARE SHOWN ON STORM WATER POLLUTION PREVENTION PLAN(S) — SEE SHEET(S) C403-C404
- A22. EXISTING SITE TOPOGRAPHY SHOWN ON THE EXISTING SITE CONDITION PLAN(S) — SEE SHEET(S) C201-C202
- A23. PROPOSED FINAL SITE TOPOGRAPHY SHOWN ON PROPOSED SITE CONDITION PLAN(S) — SEE SHEET(S) C304-C305

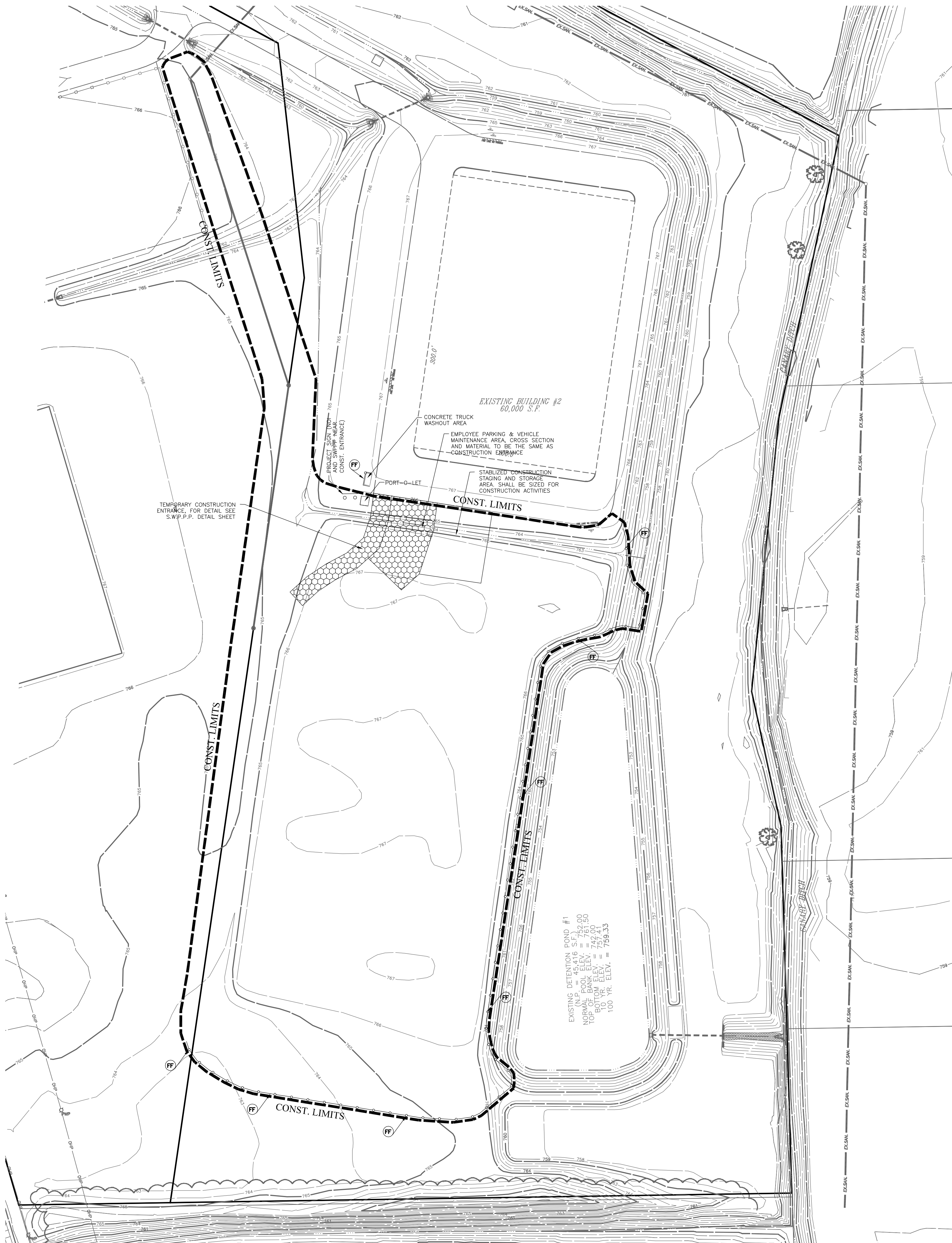
- B1. POTENTIAL STORM WATER POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITY INCLUDE GASOLINE, OIL AND OTHER FLUIDS FROM CONSTRUCTION EQUIPMENT, CONCRETE, ASPHALT AND SEDIMENT LADEN RUNOFF. CONTRACTOR SHALL ESTABLISH AN EMPLOYEE PARKING AREA AND VEHICLE MAINTENANCE AREA AS SHOWN ON THE PLAN(S). A PROPER CONCRETE WASHOUT AREA SHALL ALSO BE ESTABLISHED AS SHOWN ON THE PLAN(S). THIS WASHOUT PIT SHALL BE LOCATED WITHIN THE CURRENT 15.0 M.W. FOR DETAIL OF WASHOUT PIT SEE SHEET C802
- B2. INDIVIDUAL STORM WATER QUALITY MEASURES ARE SHOWN ON THE ATTACHED PLAN, I.E. FILTER FENCING, CONSTRUCTION ENTRANCE, SEEDING AND BLANKETS, PERENNIAL VEGETATIVE COVER WITH A UNIFORM DENSITY OF 70% IS REQUIRED BEFORE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES. AN EROSION CONTROL CONSTRUCTION SEQUENCE SCHEDULING, SHOWING THE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES IS SHOWN ON STORM WATER POLLUTION PREVENTION DETAIL SHEET — SEE SHEET C801
- B3. A CONSTRUCTION ENTRANCE LOCATION IS SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S) — SEE SHEET(S) C401-C404. FOR SPECIFICATIONS AND DETAILS REGARDING THE ENTRANCE IS SHOWN STORM WATER POLLUTION PREVENTION DETAIL SHEET, SEE SHEET C1102
- B4. SEDIMENT CONTROL MEASURES FOR SHEET FLOW SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S) — SEE SHEET(S) C401-C406, DETAIL ON SHEET C801. CONTRACTOR TO INSURE ALL REQUIRED MEASURES OF FILTER FENCE ARE INSTALLED AND REQUIRED VEGETATIVE FILTER STRIPS ARE MAINTAINED.
- B5. SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S) — SEE SHEET(S) C401-C406, DETAIL ON SHEET C802. CONTRACTOR TO GRADE DIVERSIONARY DITCHES TO CHANNEL WATER AS CONSTRUCTION PROCEEDS SO THAT SEDIMENT IS NOT ALLOWED TO FLOW UNFILTERED. NORTH AMERICAN GREEN SC-150 SHALL BE UTILIZED.
- B6. STORM SEWER INLET PROTECTION MEASURES ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S). SEE SHEET(S) C401-C406, FOR DETAILS, SEE SHEET C802. CONTRACTOR TO INSTALL TEMPORARY BASKET INSERTS, FILTER INSERTS, FILTER SLEEVES/TUBES, WIRE BASKETS OR OTHER REQUIRED INLET PROTECTION MEASURES SHOWN ON THE PLAN(S).
- B7. RUNOFF CONTROL MEASURES ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S). SEE SHEET(S) C401-C406, FOR DETAILS SHEET C802. CONTRACTOR SHALL INSTALL ALL DIVERSIONS, TEMPORARY SLOPE DRAIN OR OTHER REQUIRED RUNOFF CONTROL MEASURES SHOWN ON THE PLAN(S).
- B8. STORM WATER OUTLET PROTECTION MEASURES, I.E. TEMPORARY SEDIMENT RISER, ARE SHOWN ON STORM SEWER POLLUTION PREVENTION PLAN(S). SEE SHEET(S) C401-C406, FOR DETAILS SHEET C802. CONTRACTOR SHALL INSTALL ALL RIPRAP SLOPE PROTECTION OR OTHER REQUIRED RUNOFF CONTROL MEASURES SHOWN ON THE PLAN(S). CONTRACTOR SHALL REMOVE ALL TEMPORARY INLET/OUTLET MEASURES ONCE FINAL STABILIZATION IS COMPLETED.
- B9. NO GRADE STABILIZATION MEASURES ARE NECESSARY.
- B10. STORM WATER QUALITY LOCATIONS AND MEASURES ARE SHOWN ON THE STORM WATER POLLUTION PREVENTION SHEET(S). SEE SHEET(S) C401-C406, FOR SPECIFICATIONS, DIMENSIONS AND CONSTRUCTION DETAILS, SEE SHEET C802. CONTRACTOR SHALL INSTALL THE VARIOUS EROSION CONTROL MEASURES SHOWN STORM SEWER POLLUTION PREVENTION PLAN(S).
- B11. SURFACE STABILIZATION METHODS SHOWN ON STORM WATER POLLUTION PREVENTION SHEET(S). SEE SHEET(S) C401-C406, FOR DETAIL, SEE GENERAL NOTE ON THE STORM WATER POLLUTION PREVENTION SHEET(S). CONTRACTOR SHALL INSTALL THE REQUIRED SEEDING, MULCH BLANKETS OR OTHER SURFACE STABILIZATION MEASURES SHOWN ON THE PLAN(S).
- B12. PERMANENT SURFACE STABILIZATION METHODS SHOWN ON STORM WATER POLLUTION PREVENTION SHEET(S). SEE SHEET(S) C401-C406, FOR DETAIL, SEE GENERAL NOTE ON THE STORM WATER POLLUTION PREVENTION SHEET(S). CONTRACTOR SHALL INSTALL THE REQUIRED SEEDING, MULCH BLANKETS OR OTHER SURFACE STABILIZATION MEASURES SHOWN ON THE PLAN(S).
- B13. MATERIAL HANDLING AND STORAGE ASSOCIATED WITH CONSTRUCTION ACTIVITY SHALL MEET THE SPILL PREVENTION AND SPILL RESPONSE REQUIREMENTS IN 327 IAC 2-6.1. FULL EMERGENCY PLAN IS SHOWN ON STORM WATER POLLUTION PREVENTION DETAIL SHEET, SEE SHEET C801. ALL MATERIALS SHALL BE HANDLED ACCORDING TO THE INFORMATION IN MATERIAL SAFETY DATA SHEETS PROVIDED BY MANUFACTURERS.
- B14. MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED POLLUTION PREVENTION MEASURE ARE TO BE PROVIDED BY THE CONTRACTOR, A SELF-MONITORING PROGRAM THAT INCLUDE THE FOLLOWING MUST BE IMPLEMENTED:
- A) A TRAINED INDIVIDUAL SHALL PERFORM A WRITTEN EVALUATION OF THE PROJECT SITE
1. BY THE END OF THE NEXT BUSINESS DAY FOLLOWING EACH MEASURABLE STORM EVENT AND
2. AT LEAST ONE (1) TIME PER WEEK
- B) THE EVALUATION MUST ADDRESS:
1. THE MAINTENANCE OF EXISTING STORM WATER QUALITY MEASURES TO ENSURE THEY ARE FUNCTIONING PROPERLY AND
2. IDENTIFY ADDITIONAL MEASURES NECESSARY TO REMAIN IN COMPLIANCE WITH ALL APPLICABLE STATUTES AND RULES
- C) WRITTEN EVALUATION REPORTS MUST INCLUDE:
1. THE NAME OF THE INDIVIDUAL PERFORMING THE ACTION
2. THE DATE OF THE EVALUATION
3. PROBLEMS IDENTIFIED AT THE PROJECT SITE AND
4. DETAILS OF CORRECTIVE ACTIONS RECOMMENDED AND COMPLETED.
- IF SPILL OCCURS, NOTIFICATION MUST BE MADE TO THE IDEM OFFICE OF EMERGENCY RESPONSE (1-888-233-7745) AND THE NATIONAL RESPONSE CENTER (1-800-424-8802)
- B15. R. EROSION CONTROL FOR INDIVIDUAL BUILDING LOTS CONSTRUCTION SEQUENCE AS FOLLOWS:
1. CONSTRUCT STONE DRIVEWAY.
2. LIMIT ALL DELIVERIES TO THE STONE DRIVEWAY.
3. PRESERVE AS MUCH OF THE EXISTING VEGETATION AS POSSIBLE.
4. LARGE EXPOSED AREAS ON OR NEAR SLOPES WILL REQUIRE A SILT FENCE.
5. AFTER CONSTRUCTION OF FOUNDATION, ROUGH GRADE AND SEED LOT.
6. AFTER BUILDING CUTTERS ARE INSTALLED, USE TEMPORARY EXTENSIONS TO LET WATER PASS EXPOSED AREAS
7. AFTER FINAL GRADING, SEED OR SOD THE YARD AS SOON AS POSSIBLE

- C1. EXPECTED POLLUTANTS ASSOCIATED WITH THE PROPOSED LAND USE INCLUDE FLUIDS FROM VEHICULAR TRAFFIC (I.E. OIL, GREASE, ANTIFREEZE, GASOLINE, ETC.), SAND AND GRIT FROM ROADWAY SURFACES AND SUBSTANCES ASSOCIATED WITH THE MAINTENANCE OF LAWNS AND GARDENS. THE ONLY OTHER REASONABLY FORESEEN POLLUTION FROM THIS SITE WILL BE MINIMAL AMOUNT OF LITTER AND TRASH FROM IMPROPER DISPOSAL.
- C2. POST CONSTRUCTION STORMWATER QUALITY SHOULD BE INSTALLED PRIOR TO MAJOR LAND DISTURBANCE OCCURRING.
1. EROSION CONTROL MEASURES SHOWN ON THIS PLAN TO BE INSTALLED FIRST.
2. ANY WATER QUALITY BEST MANAGEMENT PRACTICE (BMP) STRUCTURES TO BE UTILIZED FOR SEDIMENT CONTROL.
3. INSPECT AND RE-SEED SWALES AS NEEDED AFTER COMPLETION OF FINAL GRADING.
4. MONITOR AND MAINTAIN SWALE AREAS UNTIL A MATURE STAND OF GRASS EXISTS.
5. CLEAN ALL CATCH BASINS OF DEBRIS WHEN GRADING IS COMPLETE.
6. SWEEP STREETS REGULARLY AND KEEP FREE OF DEBRIS.
7. FINAL STABILIZATION OF THE SITE USING PERMANENT SEEDING OF ALL OPEN AREAS.
- C3. POST-CONSTRUCTION STORM WATER QUALITY WILL BE ACCOMPLISHED BY ROUTING THE SITE RUNOFF THROUGH A DRY DETENTION POND DESIGNED TO DETAIN, FOR AT LEAST 24 HOURS AFTER PEAK RUNOFF OF THE RUNOFF GENERATED FROM EITHER A 1-1/4" A" STORM EVENT OR 1/2" OF DIRECT RUNOFF, WHICHEVER IS GREATER. THE DETENTION FACILITY ACTS AS A PERMANENT STORMWATER CONTROL STRUCTURE PROVIDING BOTH DETENTION AND TREATMENT OF CONTAMINATED STORMWATER RUNOFF. THE POND'S NATURAL, PHYSICAL, BIOLOGICAL, AND CHEMICAL PROCESSES THEN WORK TO REMOVE POLLUTANTS. SEDIMENTATION PROCESSES REMOVE PARTICULATES, ORGANIC MATTER, AND METALS, WHILE ADSORBED METALS AND NUTRIENTS ARE REMOVED THROUGH BIOLOGICAL UPTAKE. FURTHER MAINTENANCE INCLUDES SWEEPING OF ALL PAVED SURFACES AS WELL AS COLLECTION OF ANY LITTER. ALL DRAINAGE SWALES AND GREEN SPACES WILL BE MAINTAINED WITH REGULAR MOWING DURING GROWING SEASONS.
- C4. WATER QUALITY MEASURES (I.E. STRUCTURES AND NON-STRUCTURAL) ARE IDENTIFIED ON THE STORM SEWER POLLUTION PREVENTION PLAN(S). SEE SHEET(S) C403-C406
- C5. MAINTENANCE OF ALL STORM WATER POLLUTION PREVENTION MEASURES WILL BE THE RESPONSIBILITY OF THE PROJECT OWNER UTILIZING PROCEDURES OUTLINED ON THESE PLAN(S). ANY GRASSED OR VEGETATED AREAS THAT EXPERIENCE EROSION FROM RAINFALL EVENTS SHOULD BE REPAIRED AND REVEGETATED AS SOON AS POSSIBLE.

A. EROSION OF THE DETENTION POND BANKS SHOULD BE ADDRESSED AS SOON AS IT BECOMES VISIBLE BY FILLING THE ERODED AREA WITH SUITABLE SOIL AND ESTABLISHING VEGETATION IMMEDIATELY, PREFERABLY BY SODDING. THE SAME MEASURE SHOULD BE USED FOR STEEP BANKS OR ANY BERMS OR SWALES. THE PONDS SHOULD ALSO BE MONITORED FOR SEDIMENT. IF THE BOTTOM OF THE POND RECEIVED SIGNIFICANT SEDIMENT (LESS THAN 2 FEET DEEP), THE SEDIMENT SHOULD BE REMOVED AND REPLACED ONSITE. AN ENGINEER SHOULD BE CONTACTED TO IDENTIFY THE SOURCE AND RECOMMEND REPAIRS.

B. PAVEMENT AREAS SHOULD BE MONITORED FOR POLLUTANTS, ANY LARGE QUANTITIES OF FLUID SUCH AS OIL, ANTIFREEZE, BRAKE FLUID, ETC. FOUND ON THE PAVEMENT SHOULD BE REPORTED TO THE OWNER. THE OWNER SHOULD CLEAN THE POLLUTANTS AND PREVENT THE SOURCE FROM ENTERING THE SITE IN THE FUTURE. PAVEMENTS SHOULD ALSO BE MONITORED FOR SEDIMENT COMING FROM VEGETATIVE AREAS. IF POST CONSTRUCTION EROSION IS OCCURRING, THE SOURCE SHOULD BE RE-STABILIZED AS SOON AS POSSIBLE BY SEEDING, SODDING OR MULCHING.

SITE CONTACT:
JOHN L. PRICE
PROJECT DEVELOPMENT DIRECTOR
PATRIOT PRODUCTS LLC
PHONE: 317-727-1333
JLPRICE133@COMCAST.NET



- LEGEND :**
- EXISTING SANITARY SEWER W/ MANHOLE
 - EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET
 - EXISTING CONTOUR LINE
 - FILTER FENCE

- GENERAL NOTES:**
1. FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE SEED. THEY SHALL BE MIXED INTO THE TOP 2" OF SOIL WITH A DISK HARROW, ROTARY TILLER, OR OTHER APPROVED EQUIPMENT. FERTILIZER SHALL BE SPREAD AT THE RATE OF 400 POUNDS PER ACRE, AND AGRICULTURAL LIMESTONE AT THE RATE OF 1/2 TON PER ACRE UNLESS OTHERWISE SPECIFIED.
2. TEMPORARY SEEDING: THE AREAS WHERE STRIPPING, CUTS OR FILLS HAVE BEEN GRADED SHALL BE SEED FOR SILT AND EROSION PROTECTION WITH ONE OF THE FOLLOWING METHODS:
- A. EARLY SPRING MIX: 100% OATS SEEDING RATE: 50 LBS./ACRE
 - B. SPRING OR LATE FALL MIX: 100% ANNUAL RYE SEEDING RATE: 50 LBS./ACRE
 - C. FALL MIX: 100% PERENNIAL RYE SEEDING RATE: 50 LBS./ACRE
- STRAW OR MULCH AS APPROVED BY THE ENGINEER SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE.
3. MULCH-SEEDING: MULCH-SEEDING SHALL BE AS PER I.S.W.D.M. SPECIFICATIONS, DATED OCTOBER 2007. FERTILIZER SHALL BE 12-12-12 APPLIED AT THE RATE OF 400 POUNDS PER ACRE. SEED MIXTURE SHALL BE 60 POUNDS PER ACRE OF PERENNIAL RYE GRASS AND 60 POUNDS PER ACRE OF KENTUCKY BLUEGRASS OR ALTA FESCUE.
4. WATER QUALITY MAINTENANCE— AT THE COMPLETION OF CONSTRUCTION ALL EXCESS SOIL AND OTHER MATERIAL SHALL BE REMOVED FROM THE SITE. TO ENSURE PROPER WATER QUALITY THE SITE AND ITS STORM WATER CONVEYANCE FACILITIES SHALL BE INSPECTED AT REGULAR INTERVALS AND AFTER ALL MAJOR RAIN EVENTS. THE STORM WATER CONVEYANCE SYSTEMS SHALL BE KEPT FREE OF DEBRIS AND FLUIDS THAT COULD IMPAIR THE STORM WATER SYSTEM.
5. PROJECT SITE OWNER OR THEIR REPRESENTATIVE, KNOWLEDGEABLE IN EROSION AND SEDIMENT CONTROL, SHALL INSPECT THE SITE FOR STORM WATER POLLUTION. PREVENTION DEFICIENCIES AT LEAST WEEKLY AND AGAIN WITHIN 24 HOURS OF EVERY 1/2 INCH RAIN EVENT.
6. ALL HAZARDOUS MATERIALS USED DURING THE CONSTRUCTION OF THIS SITE SHALL BE HANDLED AT ALL TIMES ACCORDING TO RECOMMENDATIONS IN THE MATERIAL SAFETY DATA SHEETS PROVIDED BY THE MANUFACTURER. SITE CONTRACTOR TO IMPLEMENT A SPILL PREVENTION PLAN PRIOR TO START OF CONSTRUCTION.
7. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "INDIANA STORM WATER QUALITY MANUAL" AND THE SCS "FIELD OFFICE TECHNICAL GUIDE".

- NOTICES AND PERMITS**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE APPLICABLE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXISTING LOCATION OF UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.

- NOTES:**
1. ALL EROSION CONTROL MEASURES INDICATED SHALL BE MAINTAINED BY THE CONTRACTOR AND OWNER
2. THE CITY OF FRANKLIN RESERVES THE RIGHT TO REQUIRE ADDITIONAL ONSITE CONTROLS AS DEEMED NECESSARY TO MAINTAIN COMPLIANCE WITH 327 IAC 15-5 AND THE CITY'S STORMWATER MANAGEMENT ORDINANCE. ALL EROSION AND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICES AND POLLUTION PREVENTION MEASURES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE INDIANA STORMWATER QUALITY MANUAL.
3. FOR EROSION CONTROL IMPLEMENTATION AND MAINTENANCE SCHEDULE SEE "EROSION CONTROL REQUIREMENTS" ON SHEET NO. C801
4. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "INDIANA STORM WATER QUALITY MANUAL" AND THE SCS "FIELD OFFICE TECHNICAL GUIDE".
5. THE OWNER SHALL REQUEST A INSPECTION FROM THE CITY PRIOR TO SUBMITTING THE NOTICE OF TERMINATION (NOT) TO IDEM



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DATE	REVISION	SYMBOL	SCALE	PROJECT	TITLE
			1"=60'	LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK LOT #2	STORM WATER POLLUTION PREVENTION PLAN (INITIAL PRE CONST.)
			DRAWN	JPH	CHECKED
					JKS
					CERTIFIED
					JKS

PROJECTS plus
GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
(317)-882-5003

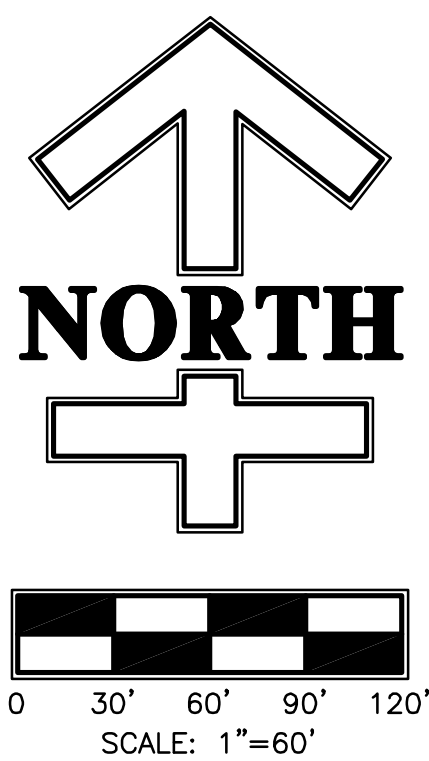
SEAL
JEFFERY K. SMITH
REGISTERED
No. 19419
STATE OF INDIANA
PROFESSIONAL ENGINEER

Jeffery K. Smith
5/13/23

JOB NUMBER
21008.01
SHEET

C401

DATE
MAY 3, 2023



- LEGEND :**

PROPOSED SANITARY SEWER W/ MANHOLE

PROPOSED STORM SEWER W/ END SECTION, MANHOLE, DITCH INLET AND CURB INLET

EXISTING SANITARY SEWER W/ MANHOLE

EXISTING STORM SEWER W/ END SECTION, MANHOLE, YARD INLET, AND CURB INLET

EXISTING CONTOUR LINE

FF FILLER FENCE

MB MULCH-SEEDING WITH NORTH AMERICAN GREEN SC-150 BLANKET OR EQUIVALENT (REQUIRED ALONG ALL DISTURBED POND BANKS AND TO THE TOP OF BANKS FOR ALL SWALES)

TS TEMPORARY SEEDING

PS PERMANENT SEEDING

RR RIP-RAP OUTLET PROTECTION REQUIRED

GENERAL NOTES:

1. FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE SPREAD UNIFORM OVER THE AREA TO BE TREATED. THE RATE OF APPLICATION SHALL BE 275 LBS/Acre FOR A DISK HARROW OR ROLLER TILERS, OR OTHER APPROPRIATE EQUIPMENT. FERTILIZER SHALL BE SPREAD AT THE RATE OF 400 LBS/Acre FOR FERTILIZER AND AGRICULTURAL LIMESTONE AT THE RATE OF 1/2 TON PER Acre UNLESS OTHERWISE SPECIFIED.

2. TEMPORARY SEEDING: THE AREAS WHERE STRIPPING, CUTS OR FILLS HAVE BEEN GRADED SHALL BE SEEDING FOR SCS AND EROSION PROTECTION WITH ONE OF THE FOLLOWING METHODS:

- A. EARLY SPRING SOW: 1000 TONS SEEDING RATE, 50 LBS/Acre
- B. SPRING OR LATE FALL: 1000 ANNUAL RYE SEEDING RATE, 50 LBS/Acre
- C. FALL: MIX 100 PERENNIAL RYE SEEDING RATE, 50 LBS/Acre

STRAW OR MULCH AS APPROVED BY THE ENGINEER SHALL BE APPLIED AT A RATE OF 2 TONS PER Acre

3. MULCH-SEEDING: MULCH-SEEDING SHALL BE AS PER I.S.W.Q.M. SPECIFICATIONS, DATE OCTOBER 2007. FERTILIZER SHALL BE 12-12-12 APPLIED AT THE RATE OF 400 LBS/Acre PER Acre. SEED SHALL BE 50 LBS/Acre TO 60 LBS/Acre PER Acre. PERENNIAL RYE GRASS AND 60 POUNDS OF KENTUCKY 31 FESCUE OR ALTA FESCUE.

4. WATER QUALITY MAINTENANCE: AT THE COMPLETION OF CONSTRUCTION ALL EXCESS SOIL AND OTHER MATERIAL SHALL BE REMOVED FROM THE SITE. THE CONSTRUCTION OF THE STORM WATER TREATMENT SITE AND ITS STORM WATER CONVEYANCE FACILITIES SHALL BE INSPECTED AT REGULAR INTERVALS TO DETERMINE IF THERE IS ANY EVIDENCE OF POLLUTION. POLLUTION SYSTEMS SHALL BE KEPT FREE OF DEBRIS AND FLUIDS THAT COULD POTENTIALLY POLLUTE STORM WATER RUNOFF.

5. PROJECT SITE OWNER OR THEIR REPRESENTATIVE: KNOWLEDGEABLE IN EROSION AND SEDIMENT CONTROL, AND CAPABLE OF SUPERVISING THE CONSTRUCTION OF THE STORM WATER TREATMENT AT LEAST WEEKLY AND AGAIN WITHIN 24 HOURS OF EVERY 1/2 INCH RAIN EVENT.

6. ALL HAZARDOUS MATERIALS USED DURING THE CONSTRUCTION OF THIS SITE SHALL BE HANDLED WITHIN THE EROSION AND SEDIMENT CONTROL RECOMMENDATION IN THE STORM WATER TREATMENT PROVIDED BY THE MANUFACTURER. SITE CONTRACTOR TO IMPLEMENT A SPILL PREVENTION PLAN PRIOR TO STARTING CONSTRUCTION.

7. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "INDIANA STORM WATER QUALITY MANUAL" AND THE SCS "FIELD OFFICE TECHNICAL GUIDE."

NOTICES AND PERMITS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.

NOTES:

1. ALL EROSION CONTROL MEASURES INDICATED SHALL BE MAINTAINED BY THE CONTRACTOR AND OWNER
2. THE CITY OF FRANKLIN RESERVES THE RIGHT TO REQUIRE ADDITIONAL ON SITE EROSION CONTROL MEASURES TO MAINTAIN COMPLIANCE WITH 327 IAC 15-5 AND THE CITY'S STORMWATER MANAGEMENT ORDINANCE. ALL EROSION AND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICES AND POLLUTION PREVENTION MEASURES MUST BE MAINTAINED AND MONITORED IN ACCORDANCE WITH THE INDIANA STORMWATER QUALITY MANUAL.
3. FOR EROSION CONTROL IMPLEMENTATION AND MAINTENANCE SCHEDULE SEE "EROSION CONTROL REQUIREMENTS" ON SHEET NO. CB01
4. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE "INDIANA STORMWATER QUALITY MANUAL" AND THE CITY OF FRANKLIN'S STORMWATER QUALITY MANUAL.
5. THE OWNER SHALL REQUEST AN INSPECTION FROM THE CITY PRIOR TO SUBMITTING THE NOTICE OF TERMINATION (NOT) TO IDEM



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LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK – LOT #2 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA TITLE STORM WATER POLLUTION PREVENTION PLAN (CONSTRUCTION/GRADING PHASE)	SCALE: 1"=60' DRAWN JPH	CHECKED JKS CERTIFIED JKS	SYMBOL REVISION DATE

PROJECTS *plus*

GREENWOOD SURVEYING COMPANY

1257 Airport Parkway Suite A - Greenwood, Indiana 46143
(317)-882-5003

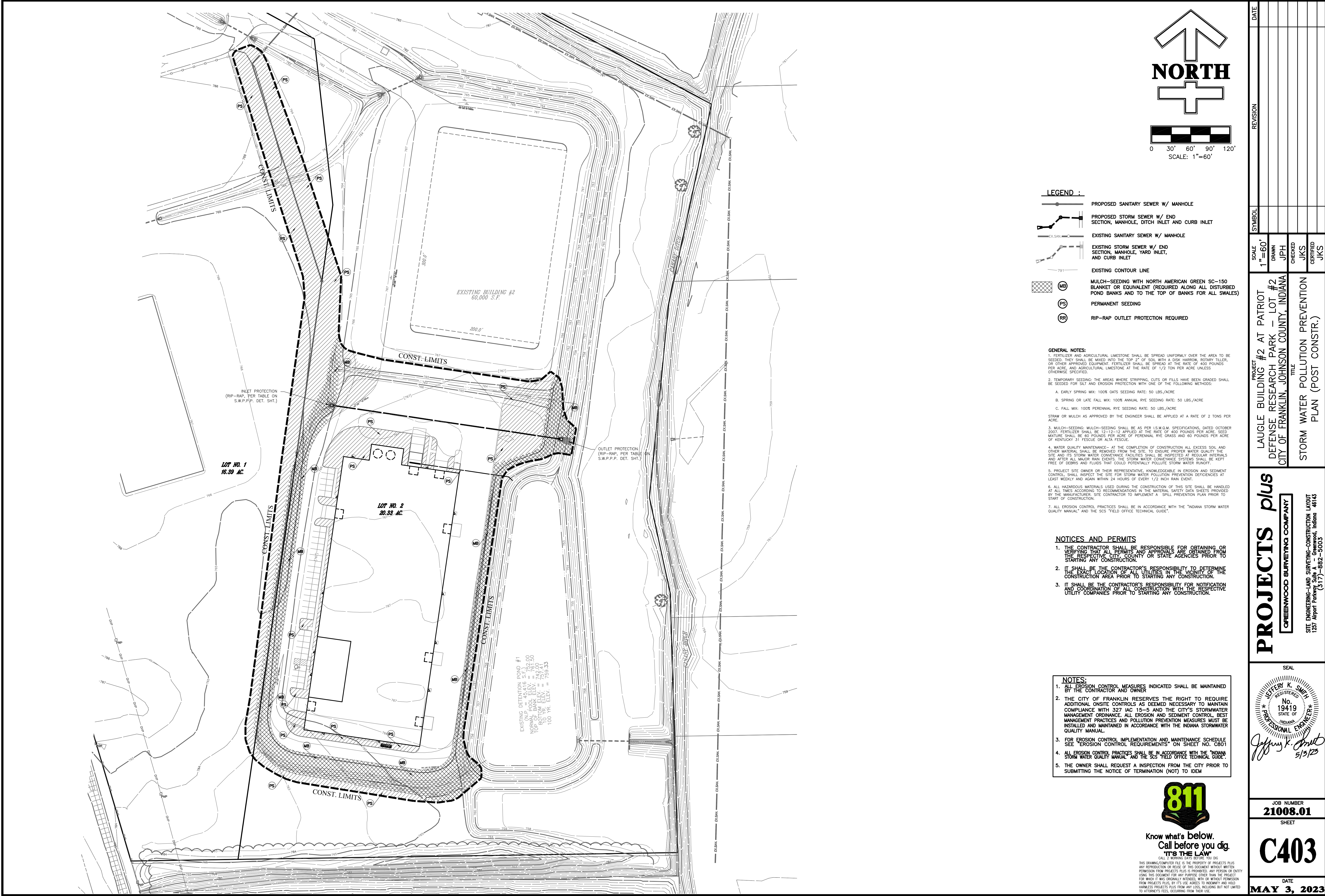
AL



JOB NUMBER
21008.01
SHEET

C403

DATE
MAY 3, 2023



DATE

REVISION

SYMBOL

SCALE

1"=60'

DRAWN

JPH

CHECKED

JKS

CERTIFIED

JKS

PROJECT

LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

TITLE

STORM WATER POLLUTION PREVENTION PLAN (POST CONSTR.)

PROJECTS plus

GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143 (317)-882-5003

SEAL

JEFFERY K. SMITH REGISTERED No. 19419 STATE OF INDIANA PROFESSIONAL ENGINEER

Jeffery K. Smith 5/13/23

JOB NUMBER

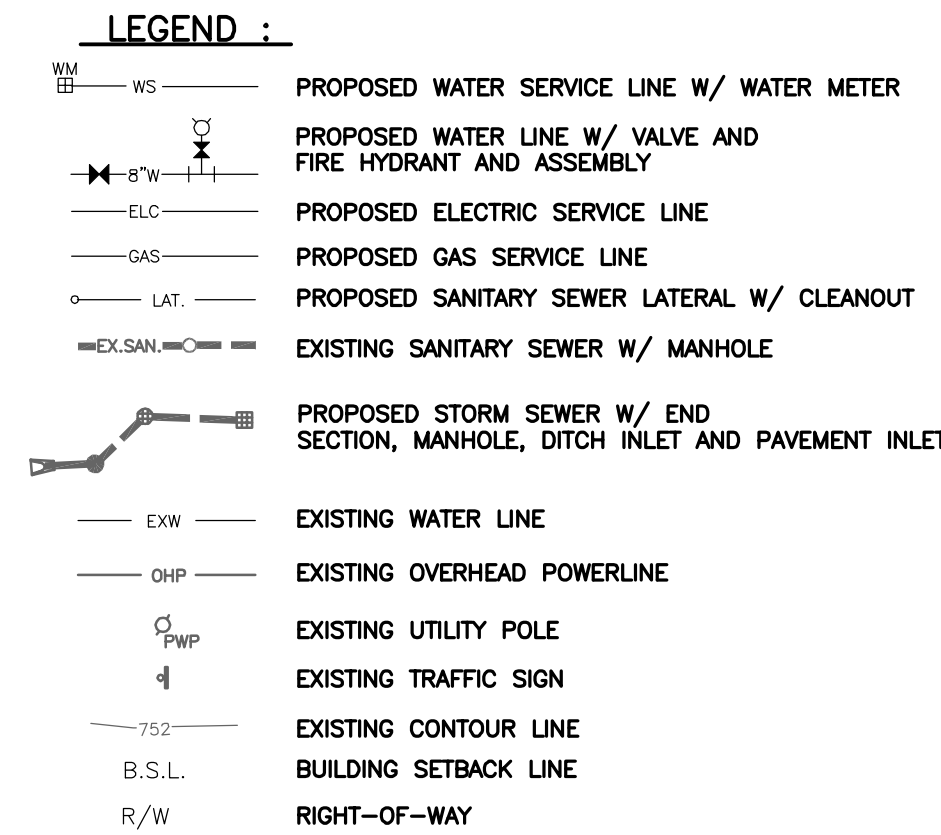
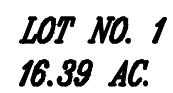
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1. CONTRACTOR SHALL RECOGNIZE RESPECTIVE WORK AND RESPONSIBILITY TO VERIFY LOCATION, SIZE, AND ELEVATION OF EXISTING UTILITIES. STRUCTURE, PIPE, POLE, OR MANHOLE, AS RELATED TO THEIR LOCATION, NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACQUAINT HIMSELF WITH SUBSOL CONDITIONS.
3. THE PLANS SHOW THE LOCATION OF ALL KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF THE CONTRACT ACCORDING TO INFORMATION PROVIDED BY THE CITY, RECORDS, AND/OR ADJACENT PROPERTY OWNERS. CONSTRUCTION PLANS AND AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
4. CONTRACTORS SHALL CONSULT ARCHITECTURAL, PLUMBING AND ELECTRICAL PLANS FOR INVERT ELEVATIONS AND EXACT LOCATION OF DOWNSPOUTS, WATER LINES GAS LINES, TRANSFORMER'S PAD OR POLE, AND BUILDING DIMENSIONS.
5. ALL PAVEMENT PATCHING DUE TO UTILITIES INSTALLATION: REPAIR OR RECONSTRUCTION OF CURBS, ETC. OR DAMAGE TO EXISTING PAVEMENT DURING CONSTRUCTION SHALL BE PATCHED WITH A PAVEMENT SECTION WHICH MEETS OR EXCEEDS JOHNSON COUNTY STANDARDS AS APPROVED BY THE ENGINEERING DEPARTMENT.
6. ALL GRASS AND/OR SHRUBBERY DESTROYED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
7. ALL EXISTING MANHOLE AND CATCH BASIN GRASSES, WATER OR GAS VALVES SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATION.
8. ALL PIPE LENGTHS SHOWN ON DRAWINGS ARE FOR HYDRAULIC CALCULATION PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE EXACT LENGTHS REQUIRED FOR ACTUAL INSTALLATION.
9. CONSTRUCTION OF ALL SEWER LINES AND STRUCTURES SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODE, RULES AND REGULATIONS.
10. WHERE WATER LINES AND SEWERS CROSS AND THE WATER LINE CANNOT BE PLACED ABOVE OR BELOW THE SEWER WITH A MINIMUM OF 18" VERTICAL CLEARANCE, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE. DUE TO THE SEWER PIPE MATERIALS (HDPE OR PLASTIC) AND/OR 24" SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS WITHIN 10' OF THE WATER LINE.
11. WHERE WATER LINES AND SEWERS RUN PARALLEL AND A MINIMUM SEPARATION DISTANCE OF 10' CANNOT BE MAINTAINED, THE SEWER MUST BE CONSTRUCTED OF WATER WORKS GRADE. JOINTS OF SEWER SHALL BE MECHANICAL JOINTS OR PLASTIC (SDR 26) SEWER PIPE WITH GASKETED, COMPRESSION-TYPE JOINTS.
12. ANY FIELD TIES ENCOUNTERED DURING THE COURSE OF CONSTRUCTION SHALL BE IMMEDIATELY IN COMPLIANCE WITH STATE AND LOCAL REGULATIONS.
13. ALL STRUCTURES ARE TO BE CONSTRUCTED TO THE "ENVIRONMENTAL" TYPE AND EMBOSSED WITH THE APPROPRIATE LANGUAGE AND SYMBOLS. SEE NOTES PHASE II COMPLIANT CASTINGS (DUMP NO WASTE; DRAWS TO RIVER) WHERE AVAILABLE.
14. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED CONCRETE SIDEWALK OR CONCRETE CURB DISTRIBUTED BY CONSTRUCTION.

1. THE CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING ANY CONSTRUCTION.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING ANY CONSTRUCTION.

A MAJORITY OF THE SITE LIES IN FLOOD HAZARD ZONE X (AREA OUTSIDE 500 YR. FLOODPLAIN), SHADED ZONE X (AREA OF 500 YR. FLOODPLAIN) AND ZONE 'AE' (AREA OF 100 YR. FLOODPLAIN, STUDIED) AS SCALE FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, INDIANA, COMMUNITY NUMBER, 18081, PANEL NUMBER, 0139 E, DATED 1/29/21

SITE ELEVATIONS ARE BASED ON GPS GEOID "G2012bu7" USING A PROJECTION OF "INDIANA EAST" AND DATUM NAD83 NO TRANS.

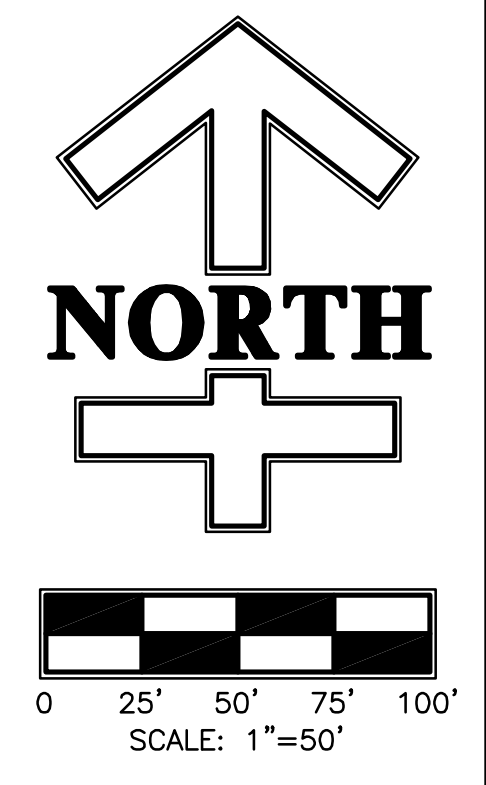
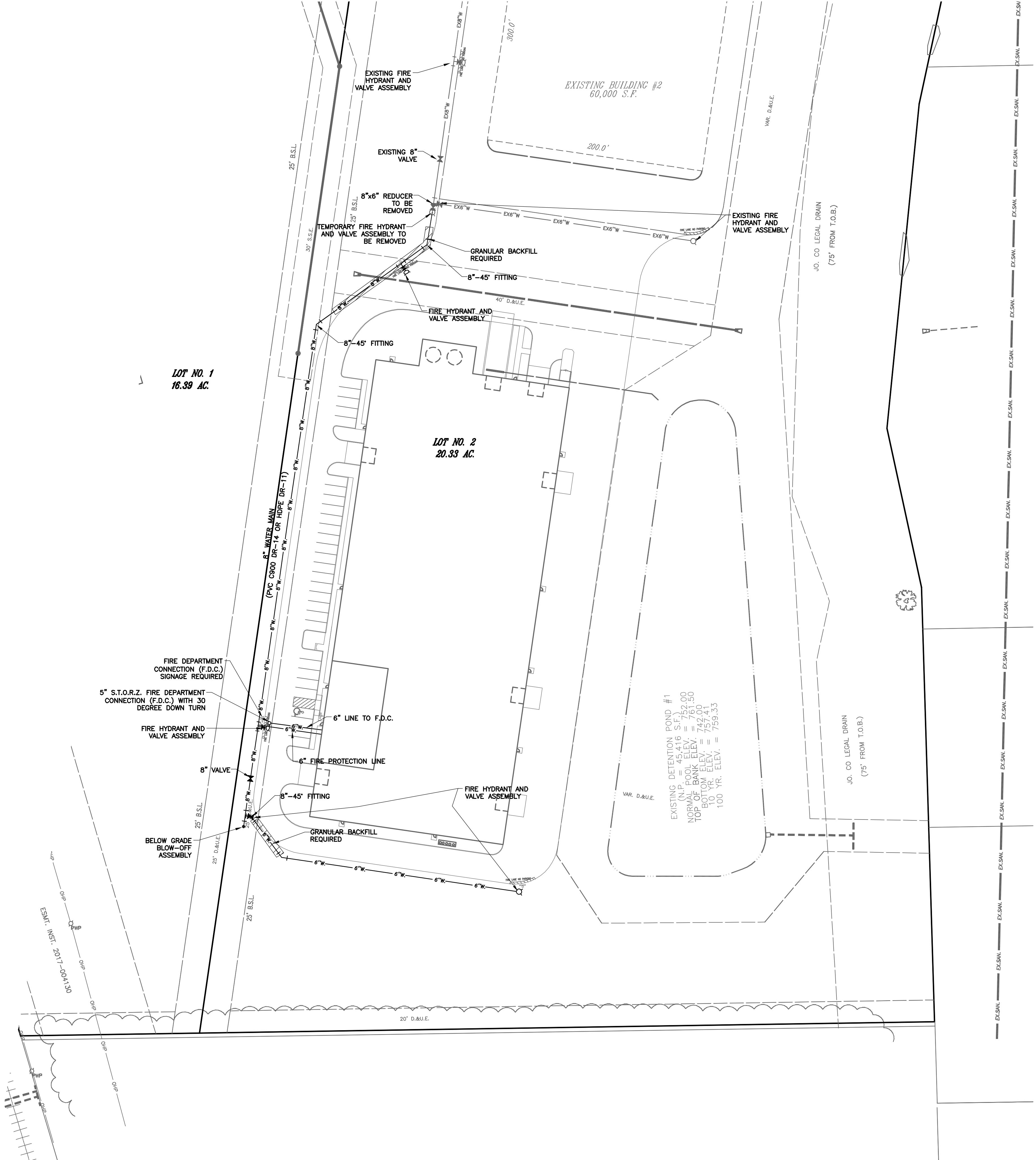
ONSITE BENCHMARK - ELEVATION 756.66 (NAVD 1983)
TOP OF SANITARY SEWER MANHOLE CASTING 362' WEST AND 38' NORTH OF
INTERSECTION OF EARLYWOOD DRIVE (CO. RD. 300 N.) AND ESSEX DR.



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<h1>PROJECTS <i>plus</i></h1> <div>GREENWOOD SURVEYING COMPANY</div> <p> SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 North Century, Suite 1004, Indiana 46163 (317)-882-5003 </p>		<p>PROJECT</p> <p>LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA</p> <p>TITLE</p> <p>UTILITY PLAN</p>		<p>SCALE</p> <p>1"=50'</p>	<p>SYMBOL</p>	<p>REVISION</p>	<p>DATE</p>
				<p>CHECKED</p>			
				<p>JKS</p>			
				<p>CERTIFIED</p>			
				<p>JKS</p>			



- LEGEND :**
- PROPOSED SANITARY SEWER W/ MANHOLE
 - PROPOSED STORM SEWER W/ END SECTION, DITCH INLET AND CURB INLET
 - PROPOSED WATER LINE W/ VALVE AND FIRE HYDRANT AND ASSEMBLY
 - EXISTING SANITARY SEWER W/ MANHOLE
 - EXISTING STORM SEWER W/ END SECTION, DITCH INLET AND CURB INLET
 - EXISTING WATER LINE W/ FIRE HYDRANT
 - B.S.L. BUILDING SETBACK LINE
 - GRANULAR BACKFILL

- INDIANA AMERICAN WATER UTILITY INSTALLATION NOTES:**
1. INSTALLATION OF WATER MAIN, FITTINGS, VALVES, FIRE HYDRANTS, AND APPURTENANCES SHALL BE IN ACCORDANCE WITH INDIANA AMERICAN WATER STANDARDS AND SPECIFICATIONS, LATEST REVISION.
 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION, SIZE AND MATERIAL OF THE EXISTING WATER MAIN PRIOR TO CONSTRUCTION.
 3. FOR PVC C900 PIPE INSTALLATION: DR14 PIPE IS REQUIRED. DEFLECTION OF PIPE JOINTS AND BENDING OF PIPES ARE NOT PERMITTED. ALL ANGLES SHALL BE MADE WITH PROPER FITTINGS. WHEN RESTRAINT OF PIPE-TO-PIPE JOINTS ARE REQUIRED, ALL JOINTS SHALL BE RESTRAINED WITH EXTERNAL SPLIT SERATED RESTRAINT HARNESSSES. SELECT FILL MATERIAL REQUIRED FOR BEDDING AND EMBEDMENT REGARDLESS OF PIPE'S PROXIMITY TO PAVEMENT.
 4. FOR DUCTILE IRON PIPE INSTALLATION: THICKNESS CLASS 52 FOR PIPES 12-INCH NOMINAL SIZE AND SMALLER. WHEN RESTRAINT OF PIPE-TO-PIPE JOINTS ARE REQUIRED, PUSH-ON RESTRAINING GASKETS WITH INTEGRAL STAINLESS STEEL LOCKING SEGMENTS ARE PERMITTED ON PIPE-TO-PIPE CONNECTIONS 12-INCH NOMINAL SIZE AND SMALLER ONLY. PIPE-TO-PIPE CONNECTIONS GREATER THAN 12-INCH NOMINAL SIZE SHALL BE RESTRAINED PER SPECIFICATION SECTION 15105.
 5. ENCASE ALL DUCTILE IRON PIPING, DUCTILE IRON FITTINGS, VALVES, HYDRANTS, AND ALL OTHER METALLIC APPURTENANCES IN 12MIL POLYETHYLENE.
 6. ALL FIRE HYDRANT LATERALS SHALL BE DUCTILE IRON PIPE.
 7. ALL MJ T-BOLTS AND FLANGE BOLTS SHALL HAVE XYLAN OR FLUOROKOTE #1 CORROSION RESISTANT COATING.
 8. ALL FITTINGS SHALL BE RESTRAINED USING MJ RETAINER GLANDS OR POURED CONCRETE THRUST BLOCKS.
 9. COPPER-CLAD STEEL TRACER WIRE REQUIRED ON INSTALLATION OF ALL PIPES. TRACER WIRE SHALL BE TAPED TO PIPE OR POLYETHYLENE ENCASEMENT AT A MINIMUM SPACING OF 10- FEET. SPICES SHALL BE ENCASED IN WATERPROOF CONNECTORS. CONTINUITY SHALL BE TESTED AFTER COMPLETION OF BACKFILL.
 10. SELECT FILL MATERIAL REQUIRED FOR FINAL BACKFILL WHEN WITHIN 5- FEET OF PAVEMENT PER SPECIFICATION SECTION 02210.
 11. MAINTAIN THE REQUIRED 10- FEET OF HORIZONTAL SEPARATION AND 18- INCHES OF VERTICAL SEPARATION FROM SANITARY AND STORM SEWERS. MAINTAIN 8- FEET OF HORIZONTAL SEPARATION FROM SANITARY AND STORM STRUCTURES. SEE 327 IAC 8-3.2-9 OF THE INDIANA ADMINISTRATIVE CODE FOR MORE INFORMATION.
 12. 8" & 3" WATER MAINS TO BE INSTALLED AT A MIN. COVER DEPTH FROM FINAL GRADE OF 4.5' (54") AND MAX. COVER DEPTH FROM FINAL GRADE OF 6.5' (78"), UNLESS OTHERWISE SPECIFIED.
 13. FOR SPECS ON ALL WATER-RELATED MATERIAL, STRUCTURE, ACCESSORY, INSTALLATION, HANDLING, ETC., CONTRACTOR TO REFER TO INDIANA AMERICAN WATER PIPELINE SPECIFICATIONS, LATEST REVISION.

- ADDITIONAL WATER NOTES:**
1. PRIOR TO ISSUANCE OF ANY BUILDING PERMITS THE AGGREGATE BASE LAYERS FOR ALL STREETS, DRIVES AND PARKING LOTS AND ALL WATER MAINS AND HYDRANTS FOR THE SITE DEVELOPMENT MUST BE INSTALLED PER APPROVED SPECIFICATIONS AND MADE SERVICEABLE.
 2. PUBLIC FIRE HYDRANTS AND WATER MAINS SHALL BE INSTALLED PER INDIANA AMERICAN WATER COMPANY REQUIREMENTS AND SPECIFICATIONS. FOR REQUIRED INSPECTIONS CONTACT INDIANA AMERICAN WATER COMPANY @ 317-881-0270
 3. FIRE HYDRANTS SHALL BE BAGGED WHEN INSTALLED, UNTIL HYDRANT IS PLACED IN SERVICE.
 4. WATER MAINS MAY NOT BE INSTALLED UNDER SIDEWALKS, WALKWAYS, LANDSCAPING OR MOUNDING.
 5. ALL FIRE HYDRANTS ARE TO BE PAINTED RED, FOR PRIVATE, WITH THE TOP CAP COLOR CODED TO SHOW WATER FLOW. 1300 GPM =BLUE, 1000-1499 GPM = GREEN, 500-999 GPM ORANGE



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REVISION		DATE

SYMBOL	SCALE	DRAWN	CHECKED	CERTIFIED
	1"=50'	JPH	JKS	JKS

PROJECT: LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

TITLE: WATER DISTRIBUTION PLAN

PROJECTS plus
GREENWOOD SURVEYING COMPANY

SEAL: JEFFERY K. SMITH, REGISTERED PROFESSIONAL ENGINEER, No. 19419, STATE OF INDIANA, dated 5/3/23

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
(317)-882-5003

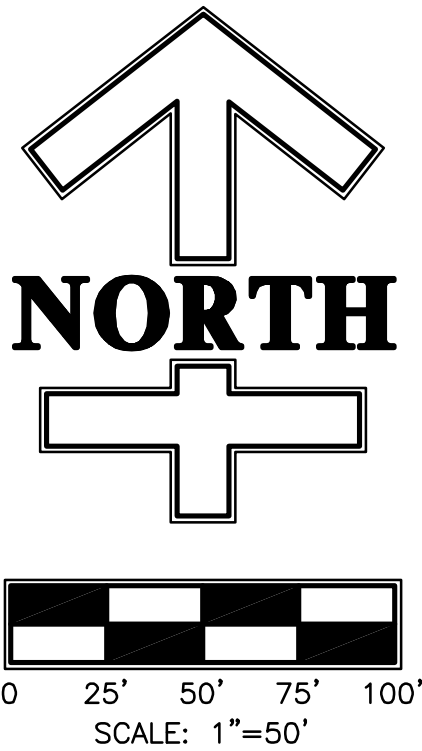
JOB NUMBER: 21008.01
SHEET: C502

DATE: MAY 3, 2023

FLOOD_ZONE DESIGNATION
A MAJORITY OF THE SITE LIES IN FLOOD HAZARD ZONE X (AREA OUTSIDE 500 YR. FLOODPLAIN), SHADED ZONE X (AREA OF 500 YR. FLOODPLAIN) AND ZONE "AE" (AREA OF 100 YR. FLOODPLAIN, STUDIED) AS SCALE FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR JOHNSON COUNTY, INDIANA, COMMUNITY NUMBER, 18081, PANEL NUMBER, 0139 E, DATED 1/29/21

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ONSITE BENCHMARK - ELEVATION 756.66 (NAVD 1983)
TOP OF SANITARYT SEWER MANHOLE CASTING 362' WEST AND 38' NORTH OF INTERSECTION OF EARLYWOOD DRIVE (CO. RD. 300 N.) AND ESSEX DR.

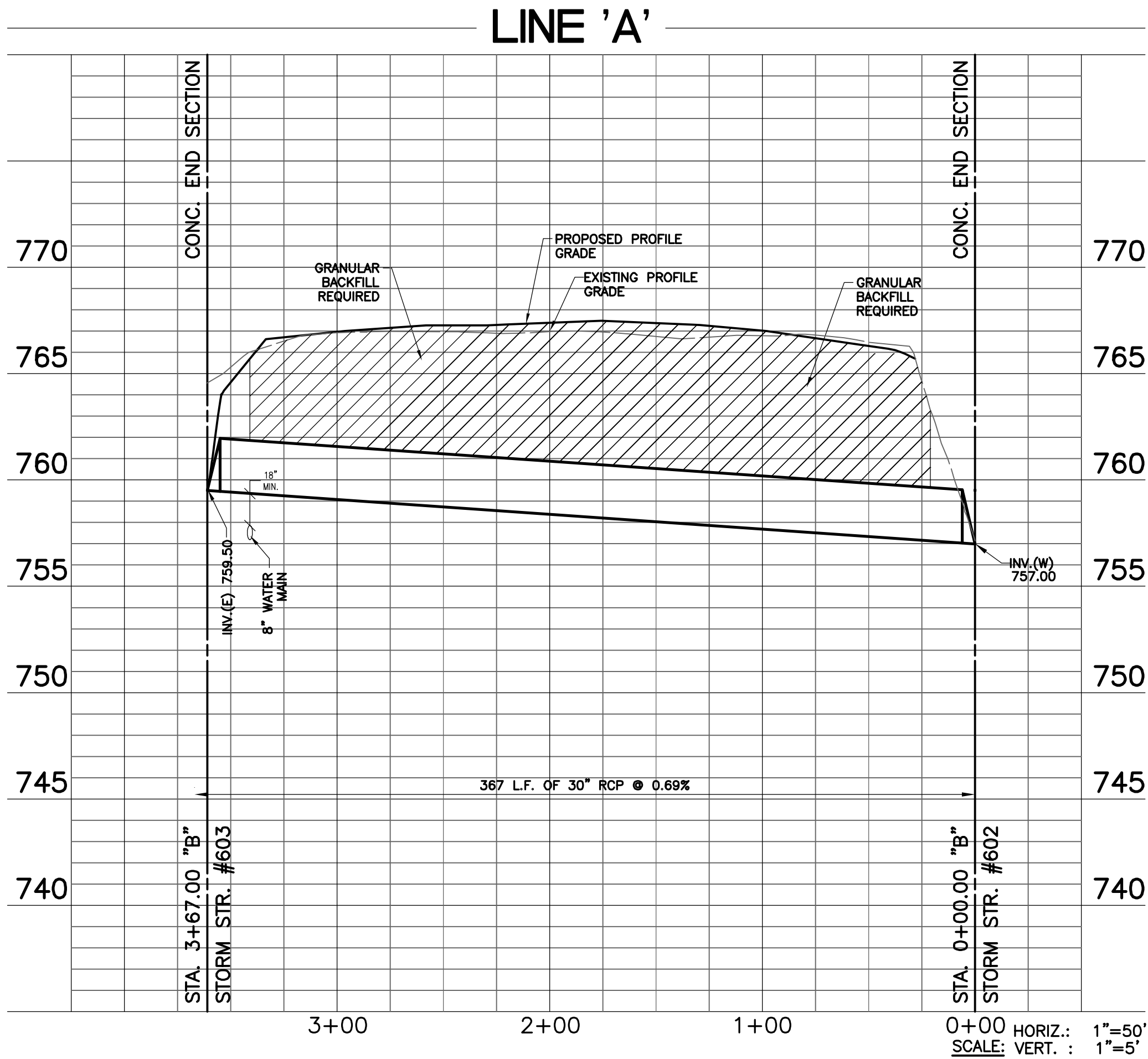
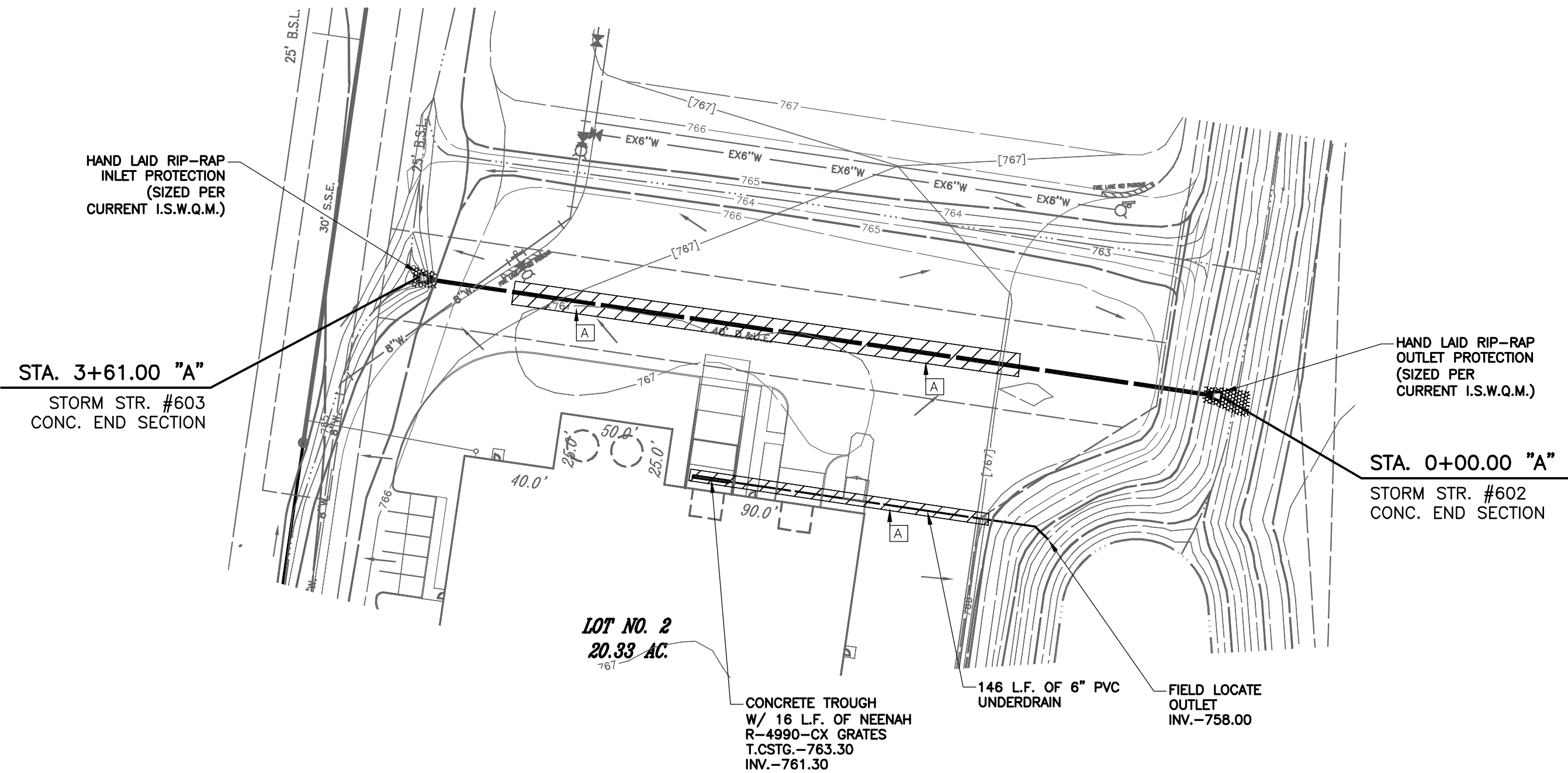


- STORM SEWER NOTES**
- THE STORM WATER QUALITY UNIT(S) SHOWN ON THESE PLANS SHALL BE THINUT INSTALLED DURING THE DEVELOPMENT OF THIS PROPERTY. NO SUBSTITUTIONS SHALL BE PERMITTED.
 - ALL CASTINGS SHALL HAVE STANDARD "ENVIRONMENTALLY FRIENDLY LOGOS" EMBOSSED INTO THE INLET.
 - ALL UTILITY CROSSINGS OR TRENCHES WITHIN (5) FEET OF THE EDGE OF PAVEMENT SHALL BE BACKFILLED TO THE SUBGRADE WITH GRANULAR MATERIAL (THE UPPERMOST 48" OF GRANULAR MATERIAL SHALL BE #53 STONE) AND COMPACTED IN SIX INCH LIFTS.
 - ALL EXISTING FIELD TILES DISTURBED DURING CONSTRUCTION SHALL BE RE-DIRECTED TO THE NEAREST STORM STRUCTURE AND SHOWN ON AS-BUILT DRAWINGS.

- NOTICES AND PERMITS**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
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FOR EASEMENT LOCATIONS AND DESIGNATIONS
SEE FINAL RECORD PLAT AND RESTRICTIONS

- LEGEND :**
- LOT NUMBER
 - PROPOSED SANITARY SEWER W/ MANHOLE
 - PROPOSED STORM SEWER W/ END SECTION, DITCH INLET AND CURB INLET
 - PROPOSED WATER LINE W/ VALVE AND FIRE HYDRANT AND ASSEMBLY
 - EXISTING CONTOUR LINE
 - SANITARY SEWER, DRAINAGE AND UTILITY EASEMENT
 - DRAINAGE AND UTILITY EASEMENT
 - BUILDING SETBACK LINE
 - GRANULAR BACKFILL
 - GRANULAR BACKFILL REQUIRED



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DATE	REVISION	SYMBOL	SCALE	AS SHOWN	DRAWN	CHECKED	CERTIFIED
					JPH	JKS	JKS

PROJECT: LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2
CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

TITLE: STORM SEWER PLAN AND PROFILES

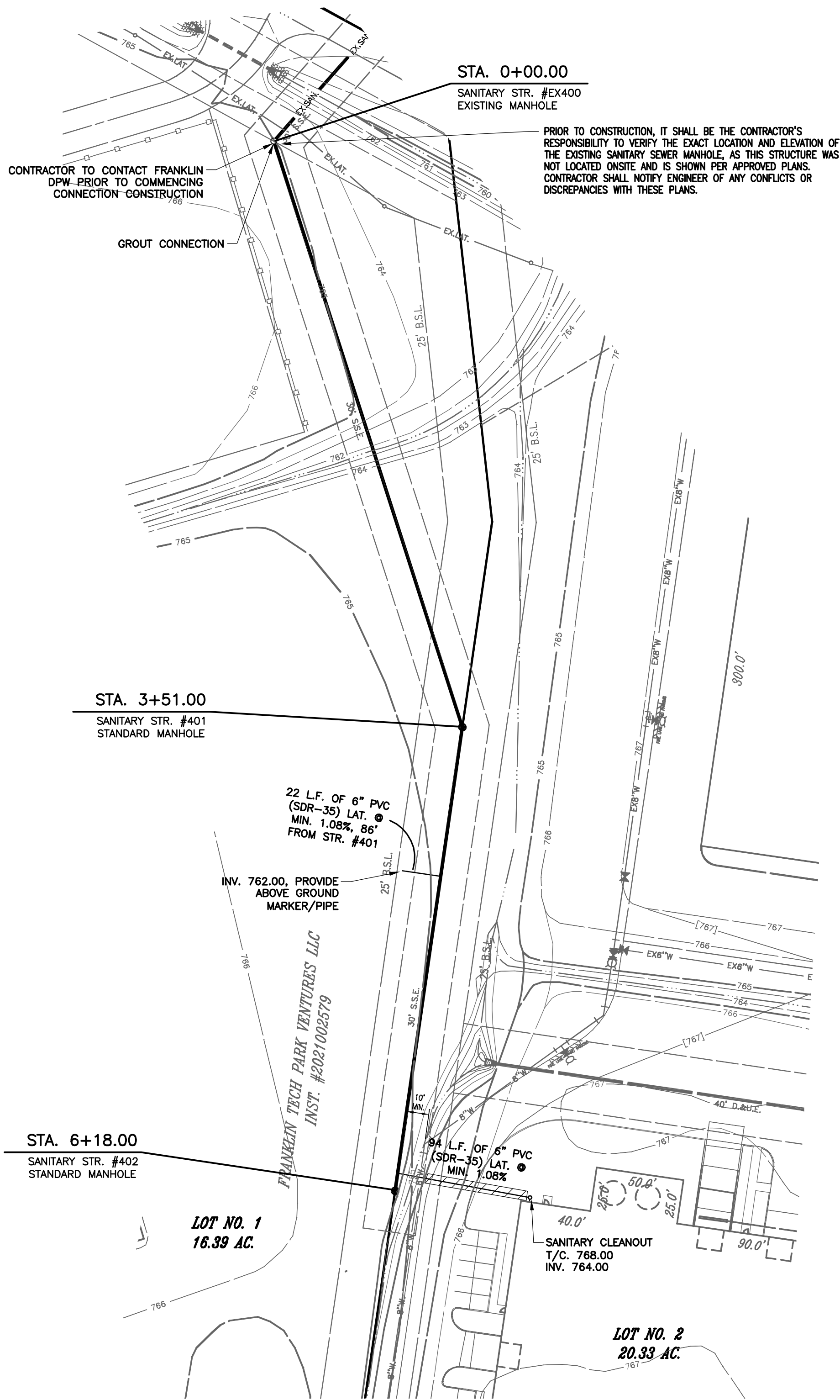
PROJECTS plus
GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
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(317)-882-5003

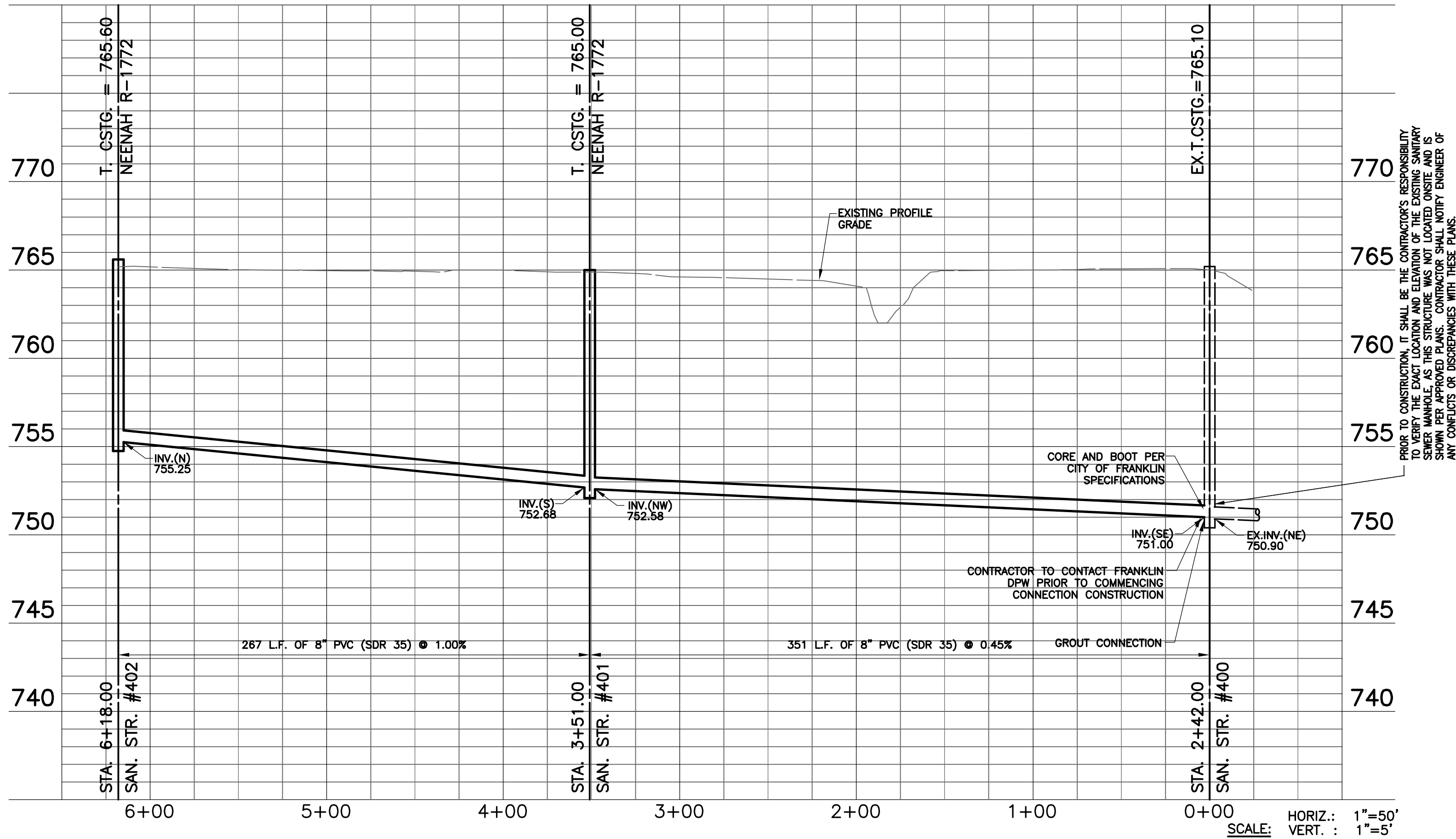
SEAL: JEFFERY K. SMITH, REGISTERED PROFESSIONAL ENGINEER, No. 19419, STATE OF INDIANA, 5/13/23

JOB NUMBER: 21008.01
SHEET: C503

DATE: MAY 3, 2023

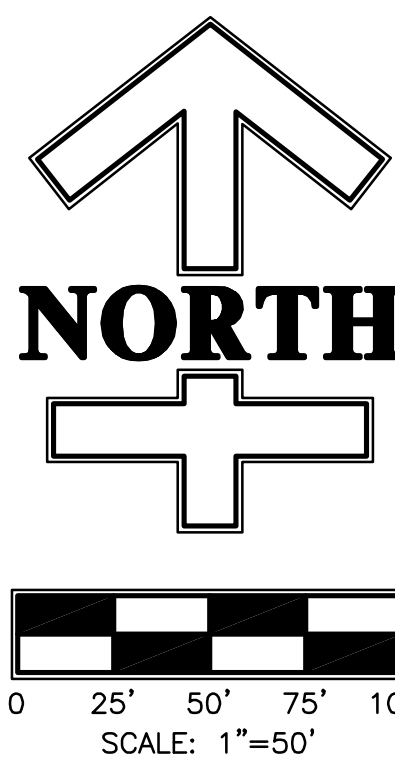


SANTIARY SEWER



GENERAL NOTES

- NONE OF THE SANITARY SEWER IN THIS PROJECT ARE TO BE CONSTRUCTED UNTIL THE LETTER OF APPROVAL FROM THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT HAS BEEN RECEIVED BY THE ENGINEER AND A COPY FORWARDED TO THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY OR STATE AGENCIES PRIOR TO STARTING ANY CONSTRUCTION.
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- IF ALTERNATE STRUCTURES ARE TO BE SUPPLIED, SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER AND APPROVED IN WRITING PRIOR TO INSTALLATION.
- SANITARY LATERALS SHALL BE LAID AT A GRADE NOT LESS THAN 1.00% TO A DEPTH AT THE PROPERTY LINE OF NOT LESS THAN 6.00 FEET.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE AVAILABLE TO THE BUILDER, DIMENSIONS TO LOCATE SEWER STUBS AND/OR ANY UTILITY CONDUIT STUBS INSTALLED.
- ALL UTILITY CROSSINGS OR TRENCHES WITHIN (5) FEET OF THE EDGE OF OF PAVEMENT SHALL BE BACKFILLED TO THE SUBGRADE WITH GRANULAR MATERIAL (THE UPPERMOST 48" OF GRANULAR MATERIAL SHALL BE #53 STONE) AND COMPACTED IN SIX INCH LIFTS.
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL BETWEEN WATER MAINS, SANITARY & STORM SEWERS, ALSO A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN WATER MAINS & SANITARY SEWER



NOTICES AND PERMITS

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- PROPOSED STORM SEWER W/ END SECTION, DITCH INLET AND CURB INLET
- PROPOSED WATER LINE W/ VALVE AND FIRE HYDRANT AND ASSEMBLY
- PROPOSED 6" SERVICE LATERAL
- EXISTING CONTOUR LINE



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SCALE	AS SHOWN	DRAWN	CHECKED	CERTIFIED
		JPH	JKS	JKS

PROJECT
LAUGLE BUILDING #2 AT PATRIOT
DEFENSE RESEARCH PARK - LOT #2
CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

TITLE
SANITARY SEWER PLAN AND
PROFILE

PROJECTS plus
GREENWOOD SURVEYING COMPANY

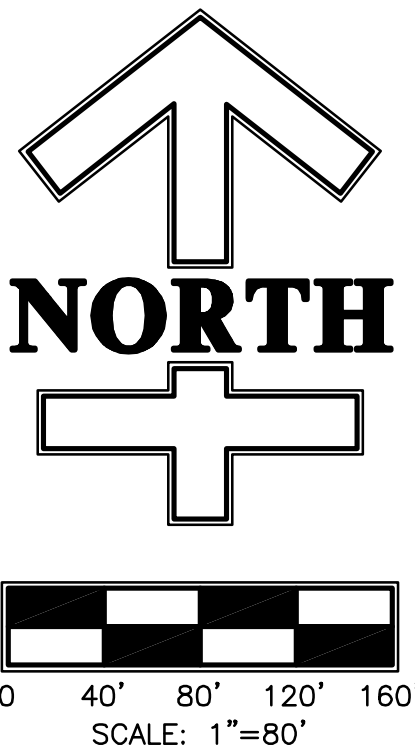
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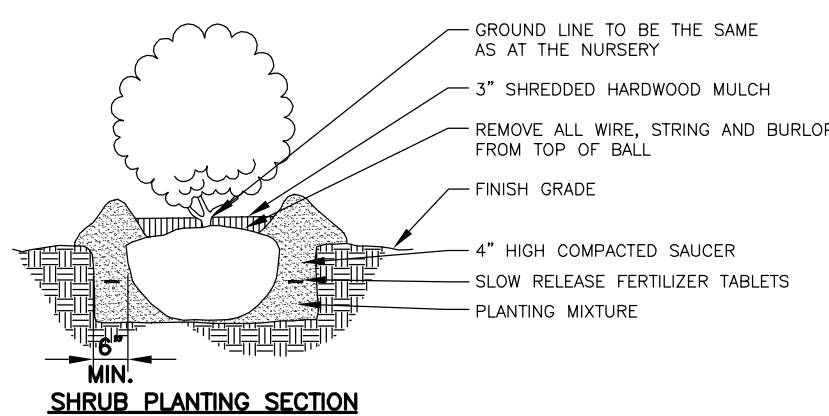
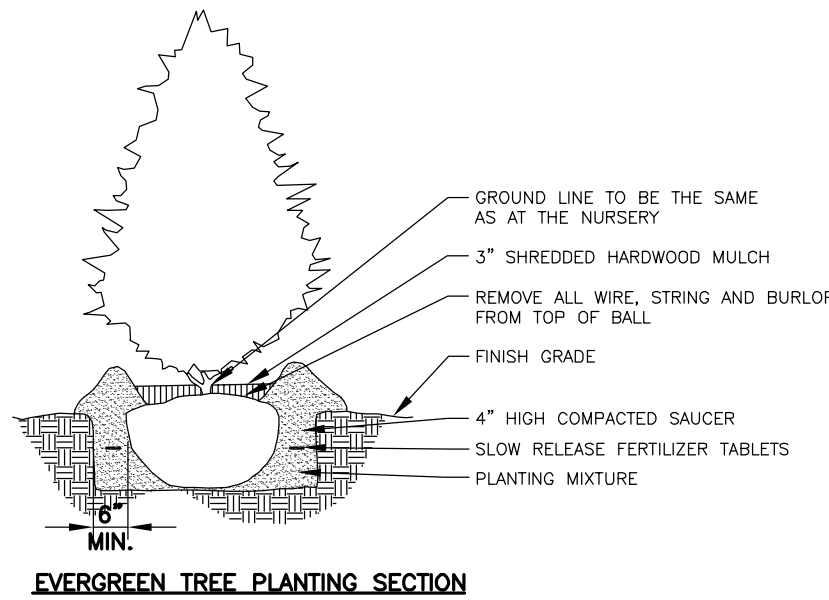
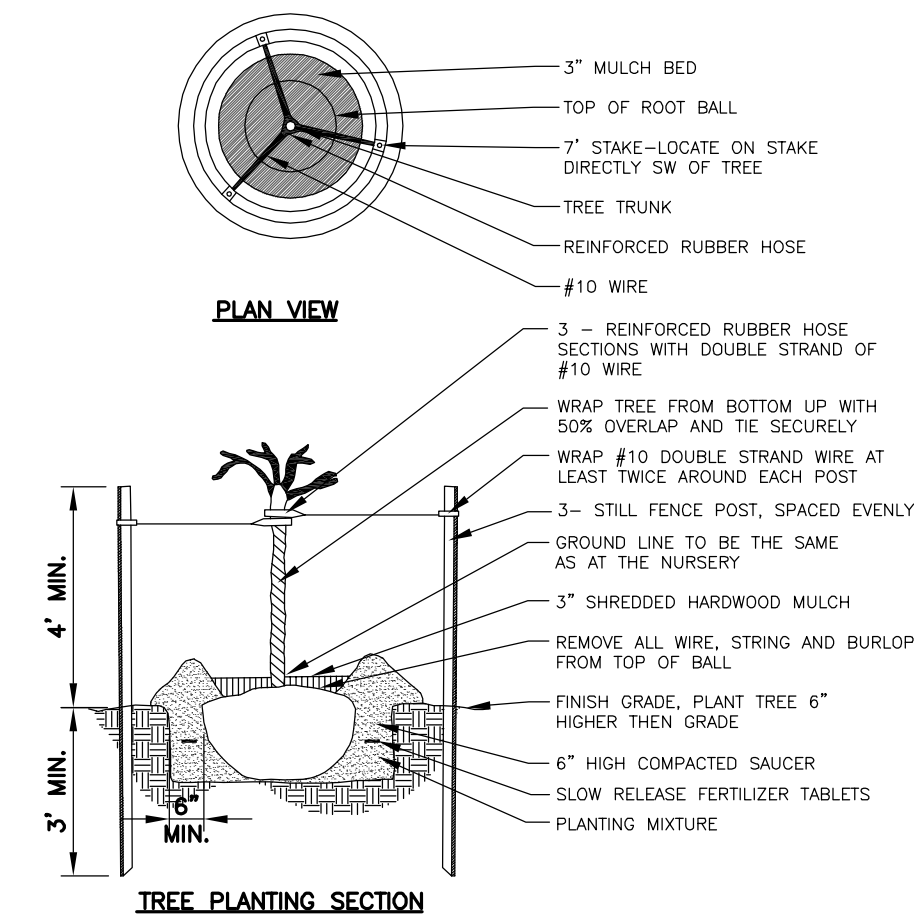
JOB NUMBER
21008.01
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DATE
MAY 3, 2023




LANDSCAPE LEGEND		
SYMBOL	REQUIREMENT	QUANTITY
	<p>1. PARKING LANDSCAPE PLANTING SHALL BE MODIFIED ONLY UNDER THE PLANNING DIRECTORS WRITTEN APPROVAL.</p> <p>2. LANDSCAPING NOT TO OBSTRUCT LINE OF SIGHT FOR MOTOR VEHICLES.</p>	
A	<p>STREET TREE – TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN SUBDIVISION CONTROL ORDINANCE 6.15.</p> <p>a. MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL.</p> <p>b. NOT WITHIN 25' OF AN INTERSECTION.</p> <p>c. NOT WITHIN 10' OF HYDRANT OR LATERAL.</p> <p>d. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE PERMITTED STREET TREE TABLE.</p>	<p>6 TREES (EXISTING)</p>
B	<p>SITE INTERIOR LANDSCAPE REQUIREMENTS – TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN ZONING ORDINANCE 7.16.</p> <p>a. 1 BROAD LEAF/ DECIDUOUS AND/OR EVERGREEN CONIFER PER THE FOLLOWING LAND TYPE:</p> <p>1. 1 FOR EVERY 1,000 S.F. OF YARD AREA MULTI FAMILY RESIDENTIAL</p> <p>2. 1 FOR EVERY 1,500 S.F. OF YARD AREA COMMERCIAL USE</p> <p>3. 1 FOR EVERY 2,500 S.F. OF YARD AREA INSTITUTIONAL USE</p> <p>4. 1 FOR EVERY 5,000 S.F. OF YARD AREA INDUSTRIAL USE</p> <p>b. ALL BROAD LEAF/ DECIDUOUS TREE MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL. TREES MAY BE LOCATED IN CLUSTERS OR DISPERSED THROUGHOUT THE SITE.</p> <p>c. ALL EVERGREEN TREE MIN. OF 5' IN HEIGHT.</p> <p>d. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE LANDSCAPE STANDARDS.</p>	<p>27 TREES (EXISTING)</p>
C	<p>PARKING LOT INTERIOR TREE – TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN ZONING ORDINANCE 7.16.</p> <p>a. 1 BROAD LEAF/ DECIDUOUS PER 300 S.F. OF LANDSCAPE AREA.</p> <p>b. ALL BROAD LEAF/ DECIDUOUS TREE MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL.</p> <p>c. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE LANDSCAPE STANDARDS.</p>	<p>16 TREES</p>
D	<p>PARKING LOT PERIMETER TREE/SHRUB – TO BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF FRANKLIN ZONING ORDINANCE 7.16.</p> <p>a. 1 BROAD LEAF/ DECIDUOUS OR EVERGREEN TREE AND 1 SHRUB PER 80 L.F. OF LANDSCAPE AREA.</p> <p>b. ALL BROAD LEAF/ DECIDUOUS TREE MIN. OF 2 1/2" CALIBER AT 6" FROM TOP OF ROOT BALL.</p> <p>c. ALL EVERGREEN TREE MIN. OF 5' IN HEIGHT.</p> <p>d. ALL SHRUBS MIN. OF 18" IN HEIGHT.</p> <p>e. PERMITTED TREE TYPES PER APPROVED SPECIES LIST DESCRIBED IN THE LANDSCAPE STANDARDS.</p>	<p>0 TREES 0 SHRUBS</p>

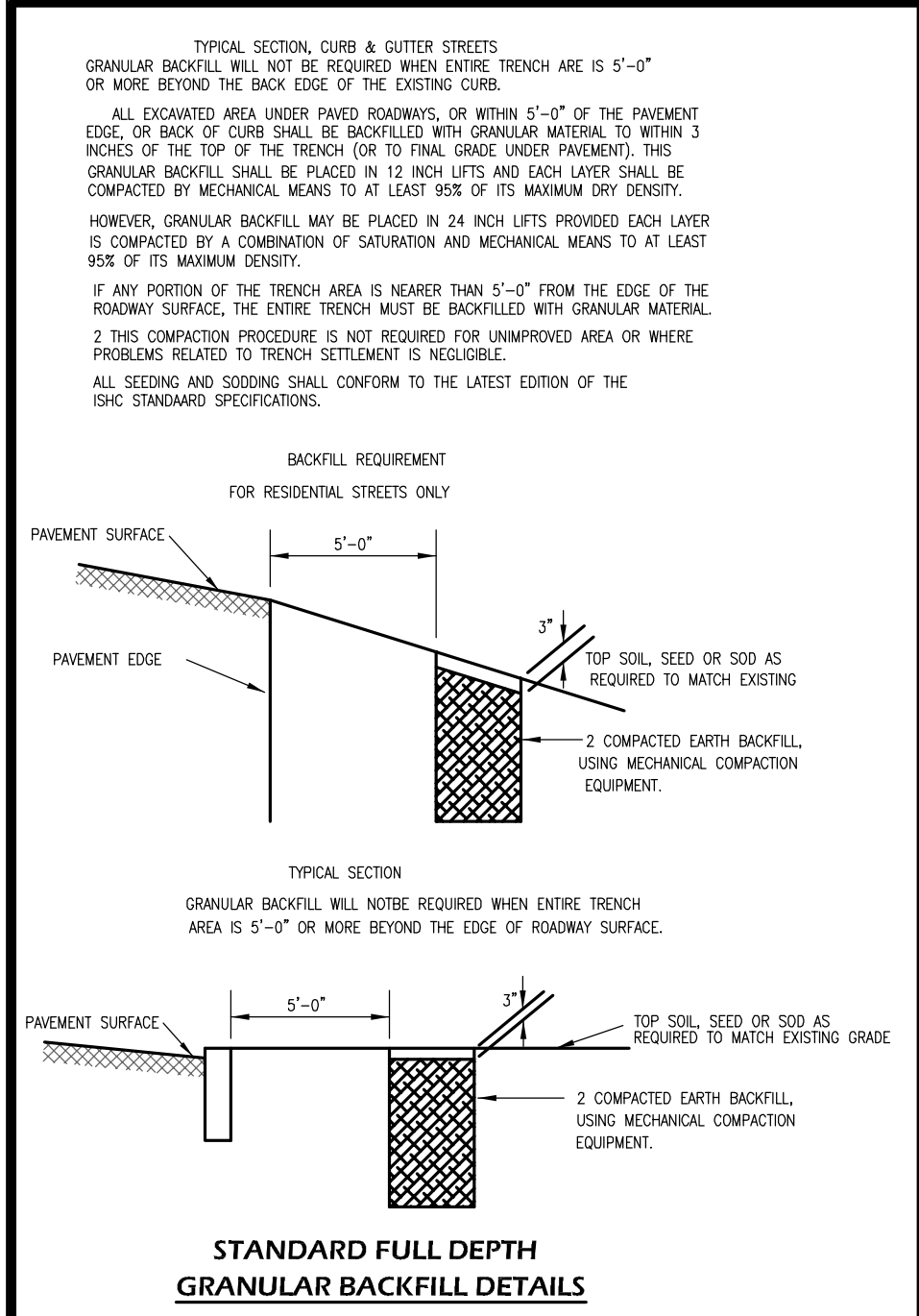


**Know what's below.
Call before you dig.
IT'S THE LAW**

CALL 2 WORKING DAYS BEFORE YOU DIG

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PROJECTS <i>plus</i> GREENWOOD SURVEYING COMPANY SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143 (317)-892-5003	SEAL  <i>Jeffery K. Smith</i> 5/13/23		JOB NUMBER 21008.01		DATE MAY 3, 2023
	SHEET C601				
	PROJECT LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA		TITLE LANDSCAPE PLAN		
	SCALE 1" = 80'	SYMBOL	REVISION	DATE	
	DRAWN JPH	CHECKED JKS	CERTIFIED JKS	DATE	

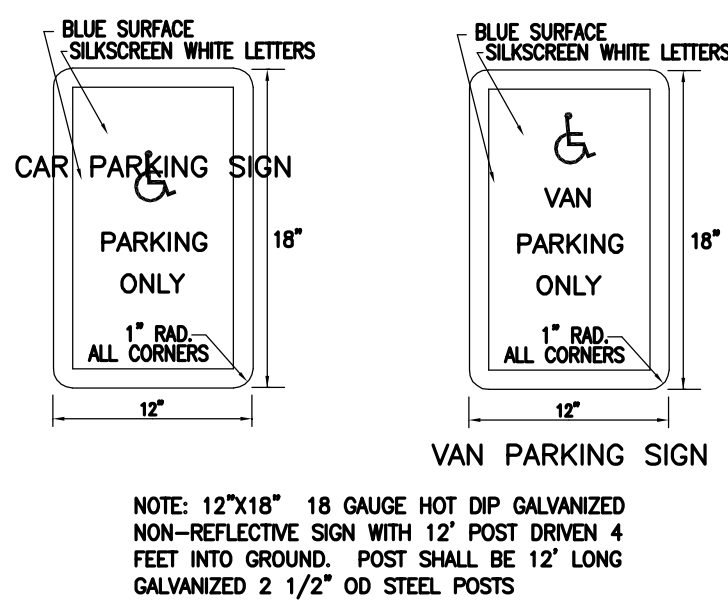
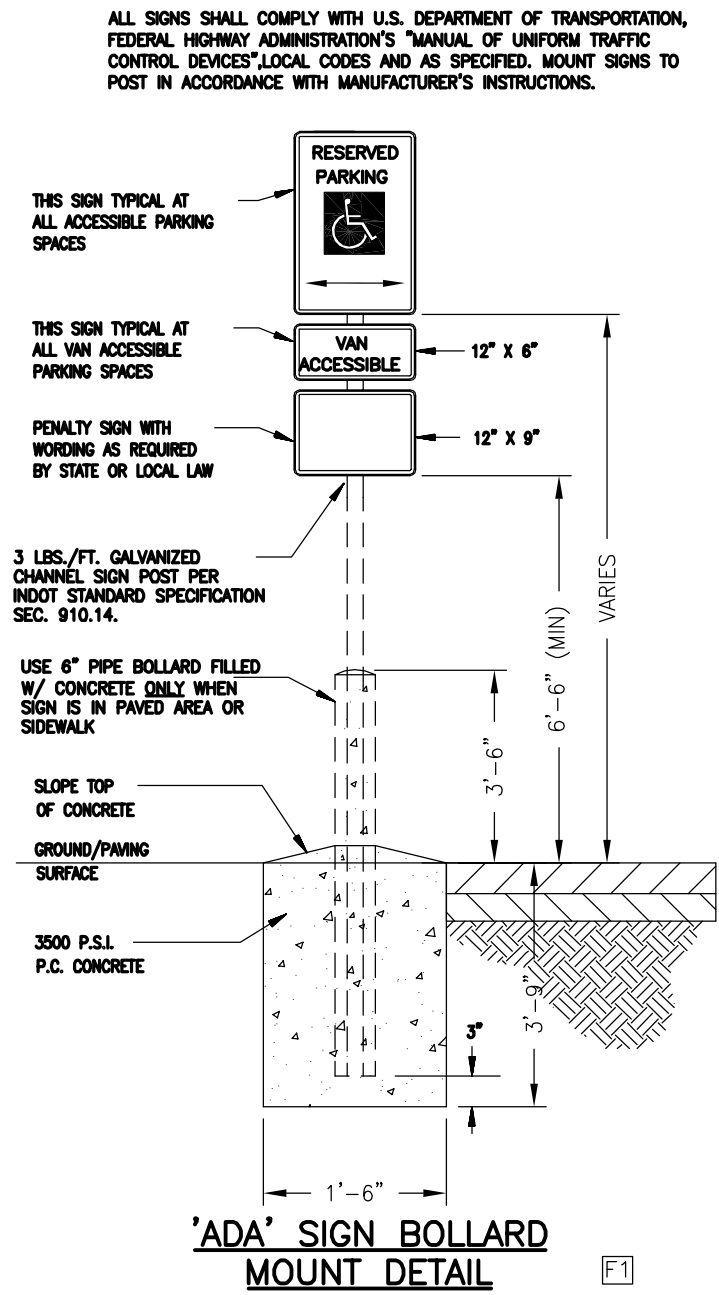
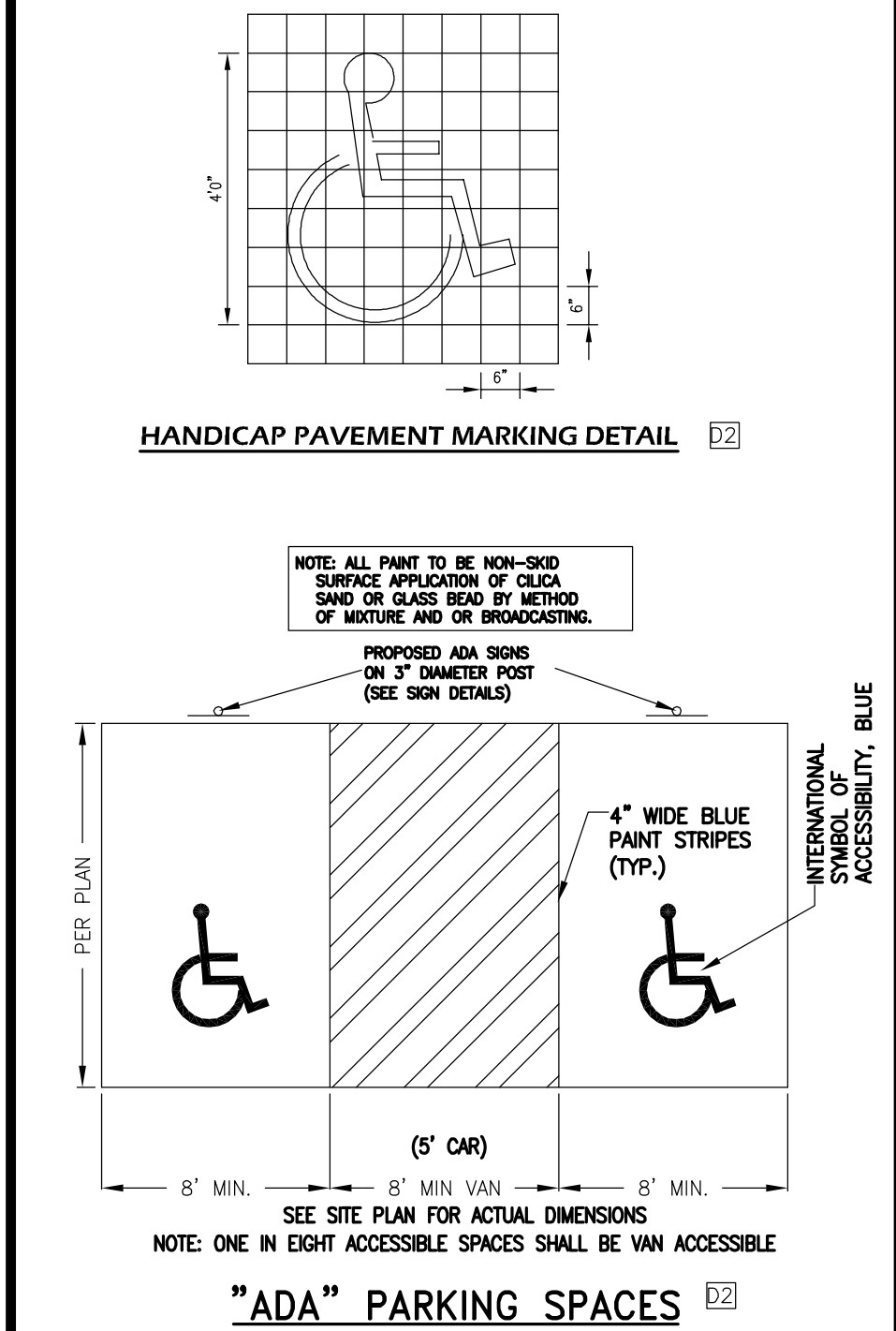


GENERAL NOTES FOR CURB AND GUTTER

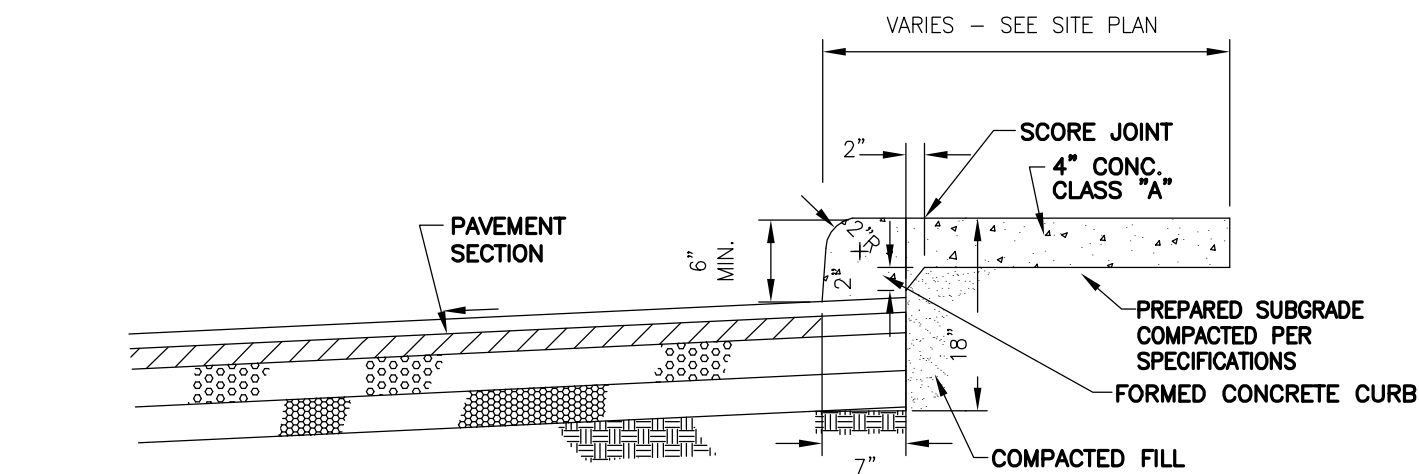
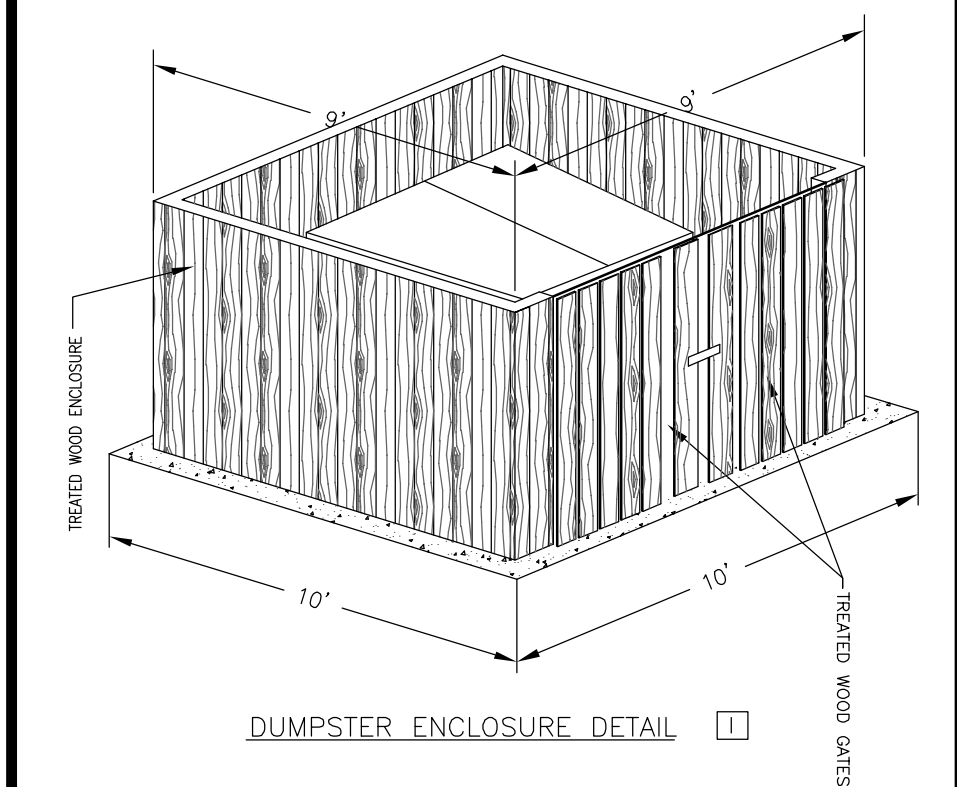
- WHERE SIDEWALK IS CONSTRUCTED IMMEDIATELY ADJACENT TO CURB, THE SURFACE OF THE SIDEWALK SHALL BE CONSTRUCTED 1/2" HIGHER THAN THE TOP OF THE CURB.
- TRANSVERSE JOINTS SHALL BE CUT WITH A JOINTER HAVING A RADIUS OF 1/4" OF SPACING AS INDICATED OR DIRECTED.
- COST OF TRANSVERSE PREFORMED JOINT FILLER TO BE INCLUDED IN CONTRACT PRICE FOR "CONCRETE SIDEWALK".
- * COMPACTED SUBGRADE - THE UPPER 6 INCHES SHALL COMPLY WITH THE DENSITY REQUIREMENTS OF THE CONTRACT IMMEDIATELY PRIOR TO PLACING THE MATERIAL THEREON. ALL SOFT YELING OR OTHER UNSUITABLE MATERIAL WHICH CANNOT BE COMPACTED SATISFACTORILY, SHALL BE REMOVED. ALL ROCK ENCOUNTERED SHALL BE REMOVED OR BROKEN OFF AT LEAST (6) INCHES BELOW THE SUBGRADE SURFACE. ANY HOLES OR DEPRESSIONS RESULTING FROM THE REMOVAL OF THE UNSUITABLE MATERIAL SHALL BE FILLED WITH SATISFACTORY MATERIAL AND COMPACTED TO CONFORM WITH THE SURROUNDING SUBGRADE SURFACE.
- ** WHERE SIDEWALK IS CONSTRUCTED ADJACENT TO CURB, THE SPACE BEHIND THE NEW CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 4".
- *** WHEN BUILT IN CONJUNCTION WITH CONCRETE PAVEMENT EXPANSION AND CONTRACTION JOINTS SHOULD BE PLACED AT THE SAME LOCATIONS AS IN THE PAVEMENT SLAB. THE CURB AND GUTTER SHOULD BE TIED TO THE PAVEMENT BY 1/2" ROUND DEFORMED BARS AT ABOUT 3 FOOT INTERVALS. IF NO CONCRETE PAVEMENT IS BEING BUILT, AT THE TIME, THE CURB IS CONSTRUCTED, EXPANSION JOINTS SHOULD BE PLACED AT THE ENDS OF ALL RETURNS AND AT INTERVALS NOT TO EXCEED 100 FEET. CONTRACTION JOINTS SHOULD BE INSTALLED AT 20 FOOT SPACING.

GENERAL NOTES:

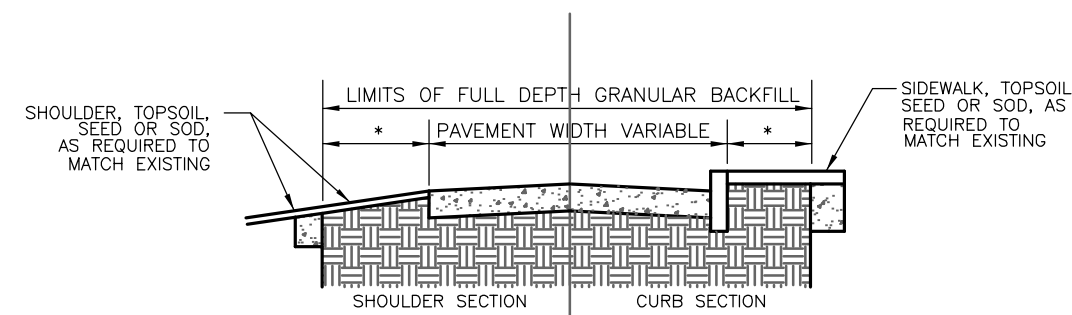
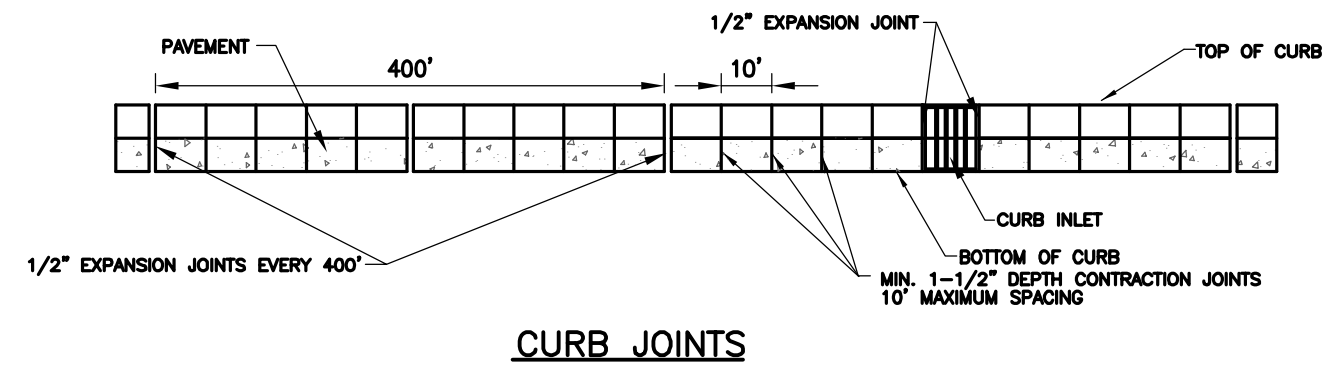
1. WHEN THE INTERSECTION IS NOT SIGNALIZED, SIDEWALK RAMPS SHALL BE PLACED ON THE RESIDENTIAL STREET SIDE ONLY. WHEN INTERSECTION IS SIGNALIZED, SIDEWALK RAMPS SHALL BE PLACED ON BOTH RESIDENTIAL STREET AND ARTERIAL STREET SIDE.
2. CURB CUT RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED.
3. RAMPS SHALL BE PROVIDED AT ALL CORNERS OF STREET INTERSECTIONS WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT WALK LOCATIONS IN MED-BLOCK IN THE VICINITIES OF HOSPITALS, MEDICAL CENTERS, AND ATHLETIC STADIUMS.
4. SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COURSE BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.
5. SIDEWALKS SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.
6. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON ALL RAMPS WITH NO BREAKS IN GRADE.
7. DRAINAGE STRUCTURES SHALL NOT BE PLACED IN LINE WITH RAMPS EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION. LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE.
8. THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
9. EXPANSION JOINT FOR THE RAMP SHALL BE A MAXIMUM 1/2" WIDE. THE TOP OF THE JOINT FILLER FOR RAMP TYPES SHALL BE FLUSH WITH ADJACENT CONCRETE.
10. CROSSLANE AND STOP LINE MARKINGS, IF USED, SHALL BE 50' LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS.
11. SLOPE OF RAMP MAY BE MODIFIED WHEN FIELD CONDITIONS WARRANT AND WHEN APPROVED BY THE DEPARTMENT OF TRANSPORTATION.



"ADA" SIGNS

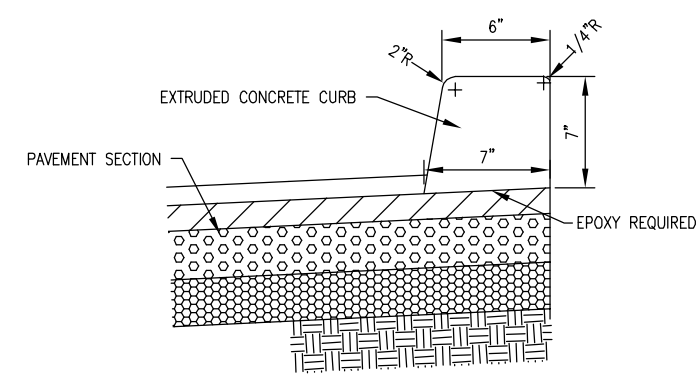


MONOLITHIC 6" CONCRETE CURB, SIDEWALK AND PAVEMENT

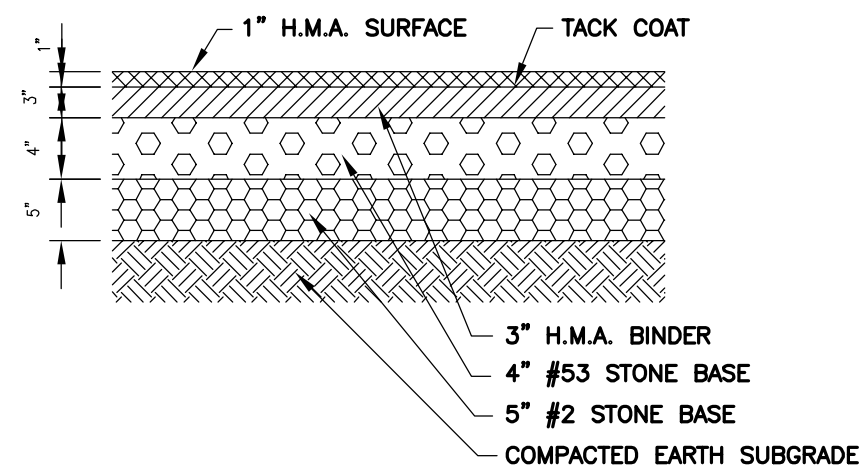


- * GRANULAR BACKFILL:
- ALL CUTS MADE IN OR UNDER ANY ROAD SURFACE SHALL BE BACKFILLED WITH GRANULAR MATERIAL. WHERE A CUT EITHER TRANSVERSES OR PARALLELS THE ROAD SURFACE, GRANULAR BACKFILL SHALL BE PLACED IN THAT PORTION OF THE CUT LOCATED WITHIN THREE (3) FEET OF THE ROAD SURFACE OR WITHIN A DISTANCE OF EQUAL TO ONE-HALF (1/2) THE DEPTH OF THE CUT, WHICHEVER IS GREATER.
- MATERIAL PLACEMENT AND COMPACTION SHALL CONFORM TO GENERAL ORDINANCE NO. 24, 1965, SECTION 28-202.

CURB JOINT DETAIL



EXTRUDED CONCRETE CURB



DATE	REVISION	SYMBOL	SCALE	PROJECT	TITLE
			NONE	LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2	SITE DETAILS
			DRAWN	JPH	
			CHECKED	JKS	
			CERTIFIED	JKS	

PROJECTS *plus*

GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
(317) 882-5003

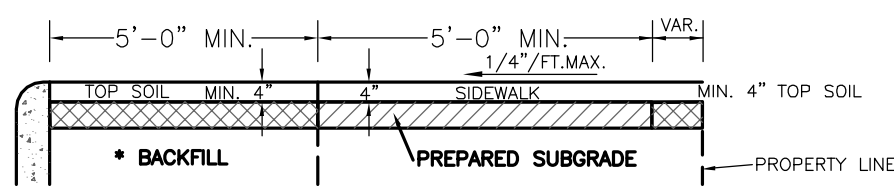
SEAL

JEFFERY K. SMITH
REGISTERED
No. 19419
STATE OF INDIANA
PROFESSIONAL ENGINEER
Jeffery K. Smith
5/3/23

JOB NUMBER
21008.01
SHEET

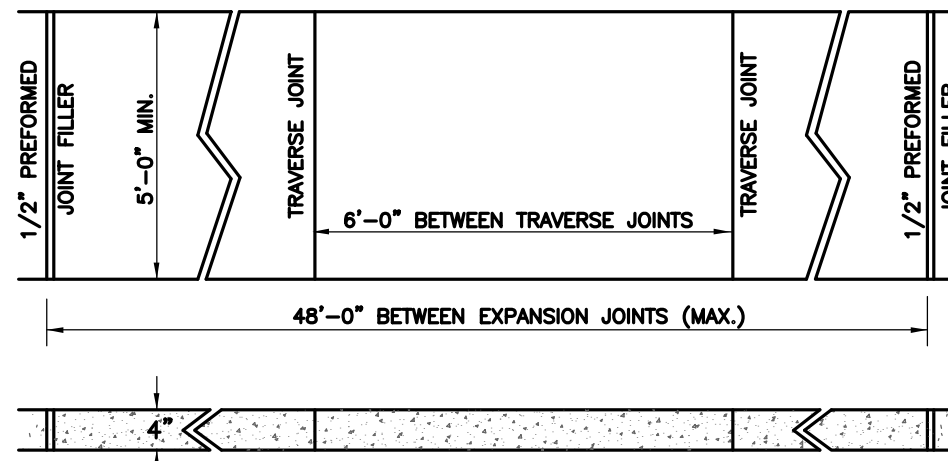
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DATE
MAY 3, 2023

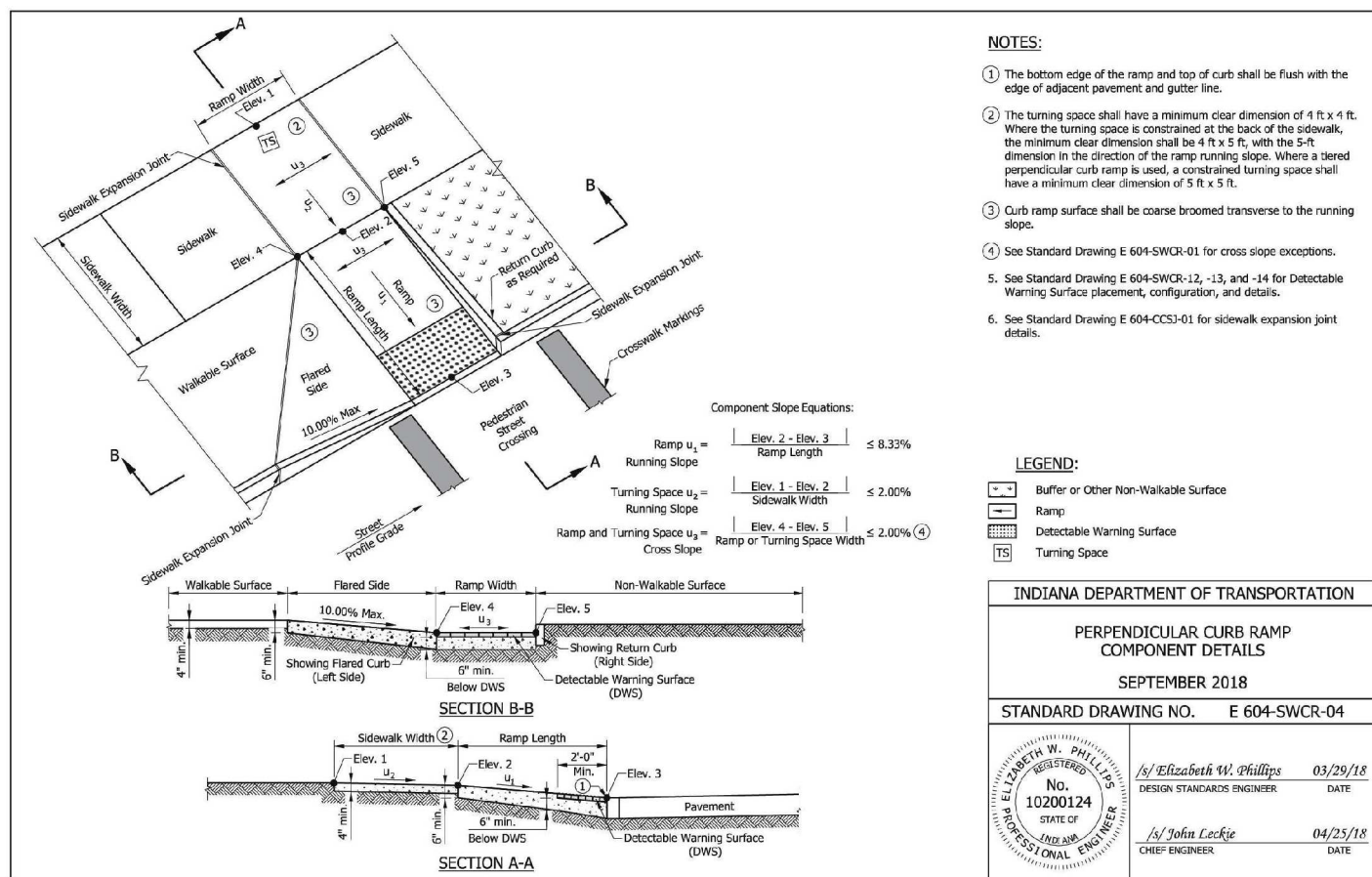


* THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 6" IN DEPTH. SUBGRADE UNDER ALL CURB, SIDEWALK, AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 207.02 OF THE STANDARD SPECIFICATIONS.

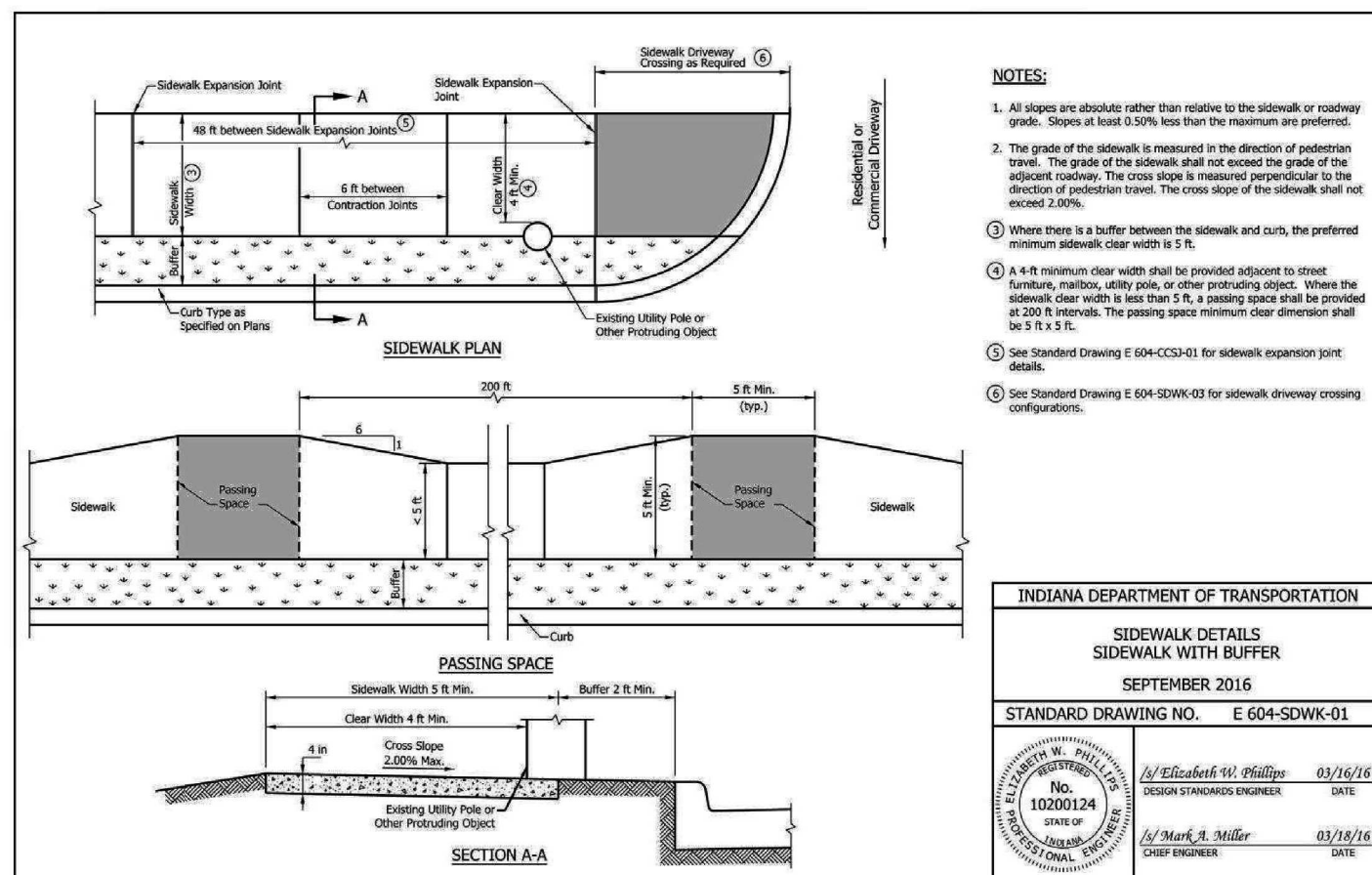
TYPICAL SIDEWALK SECTION



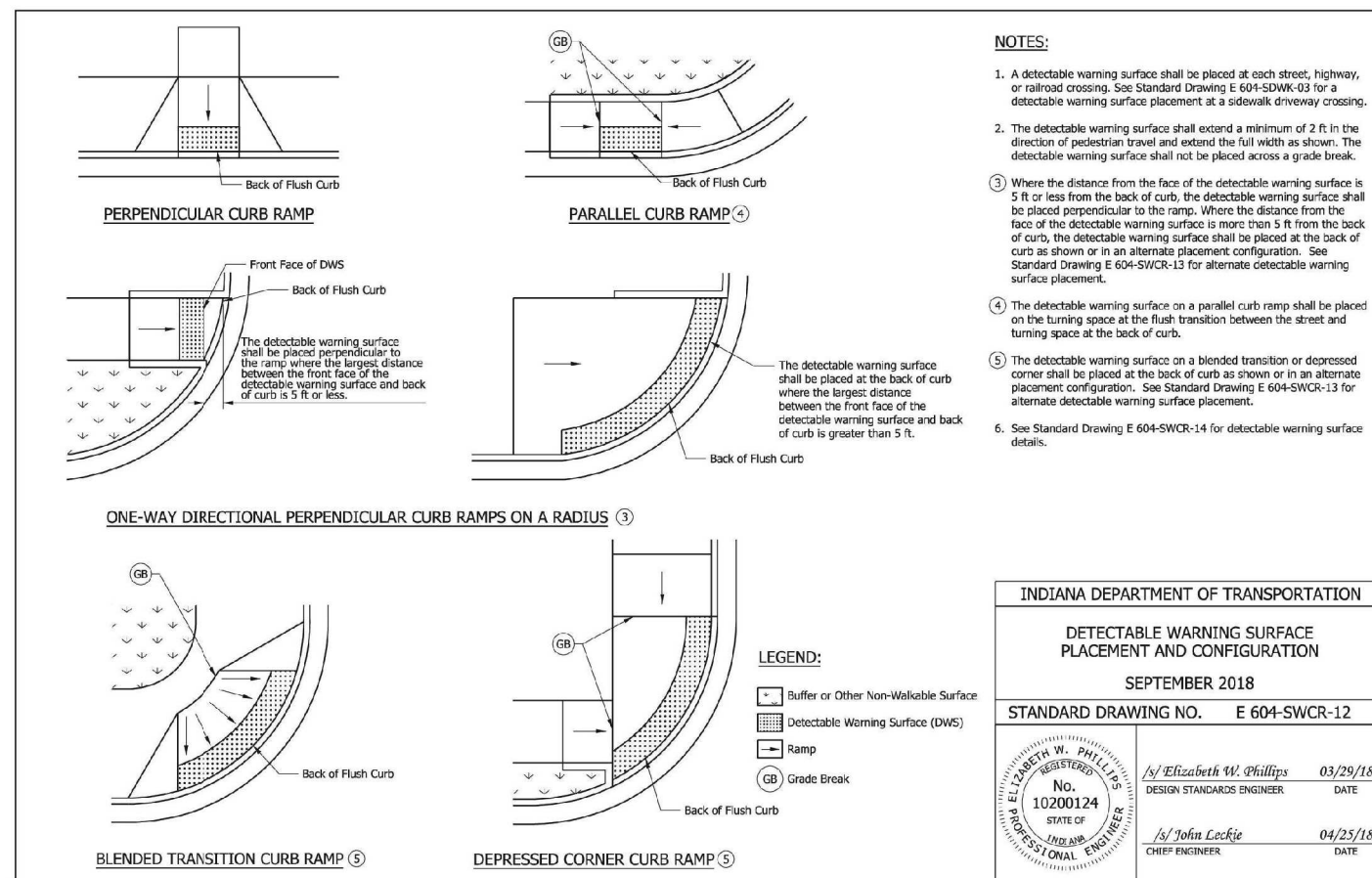
CONCRETE SIDEWALK



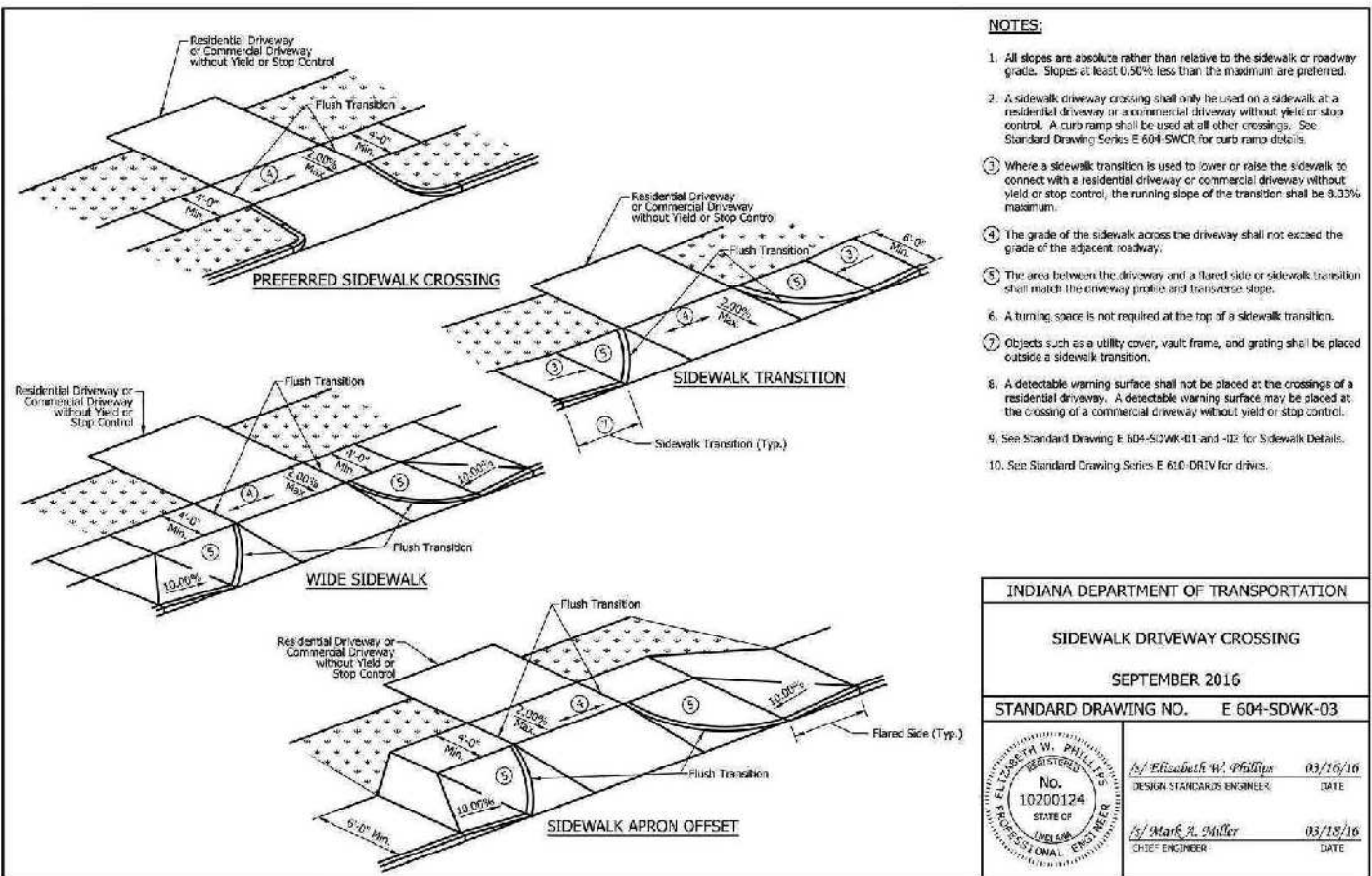
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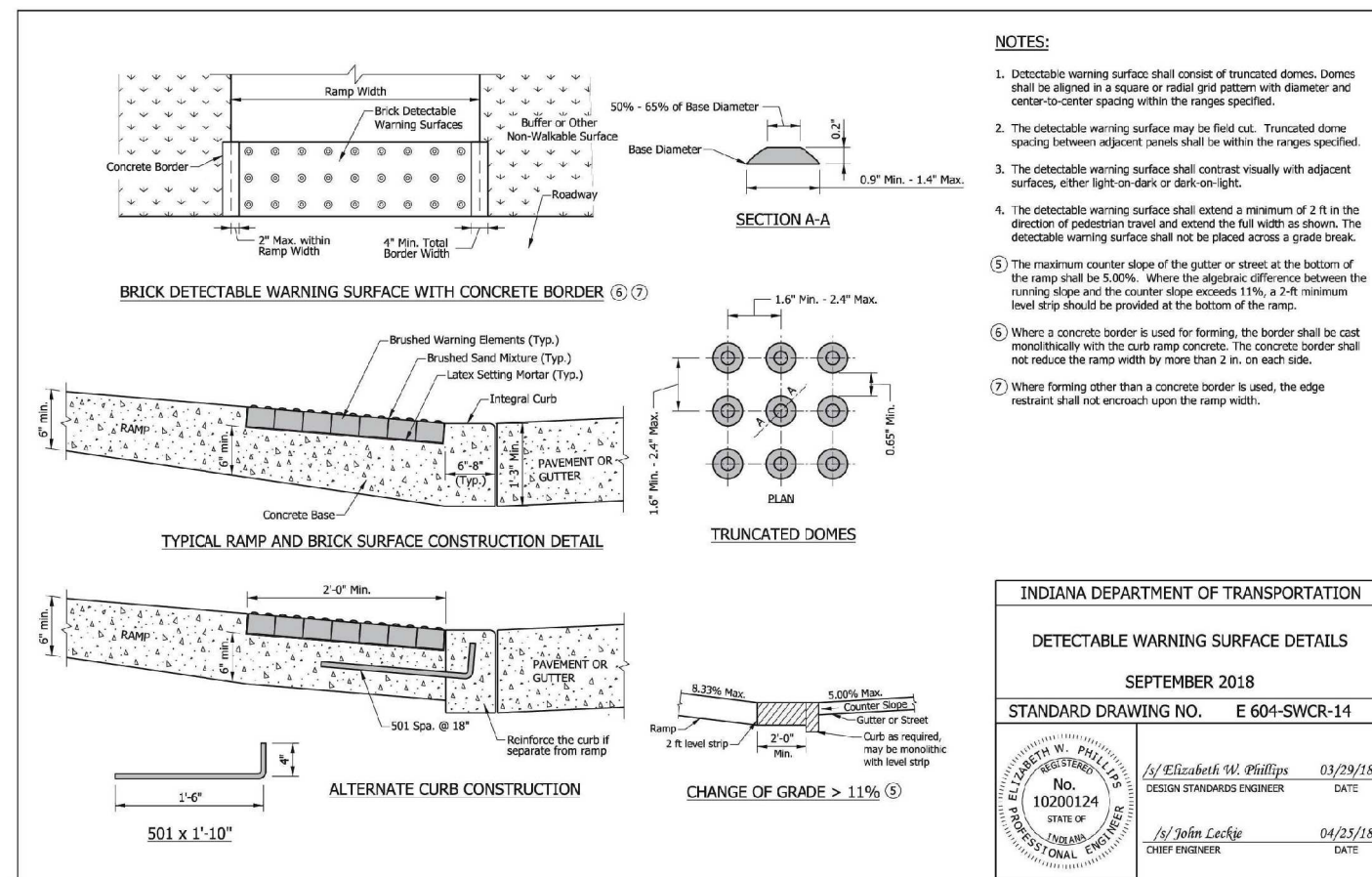
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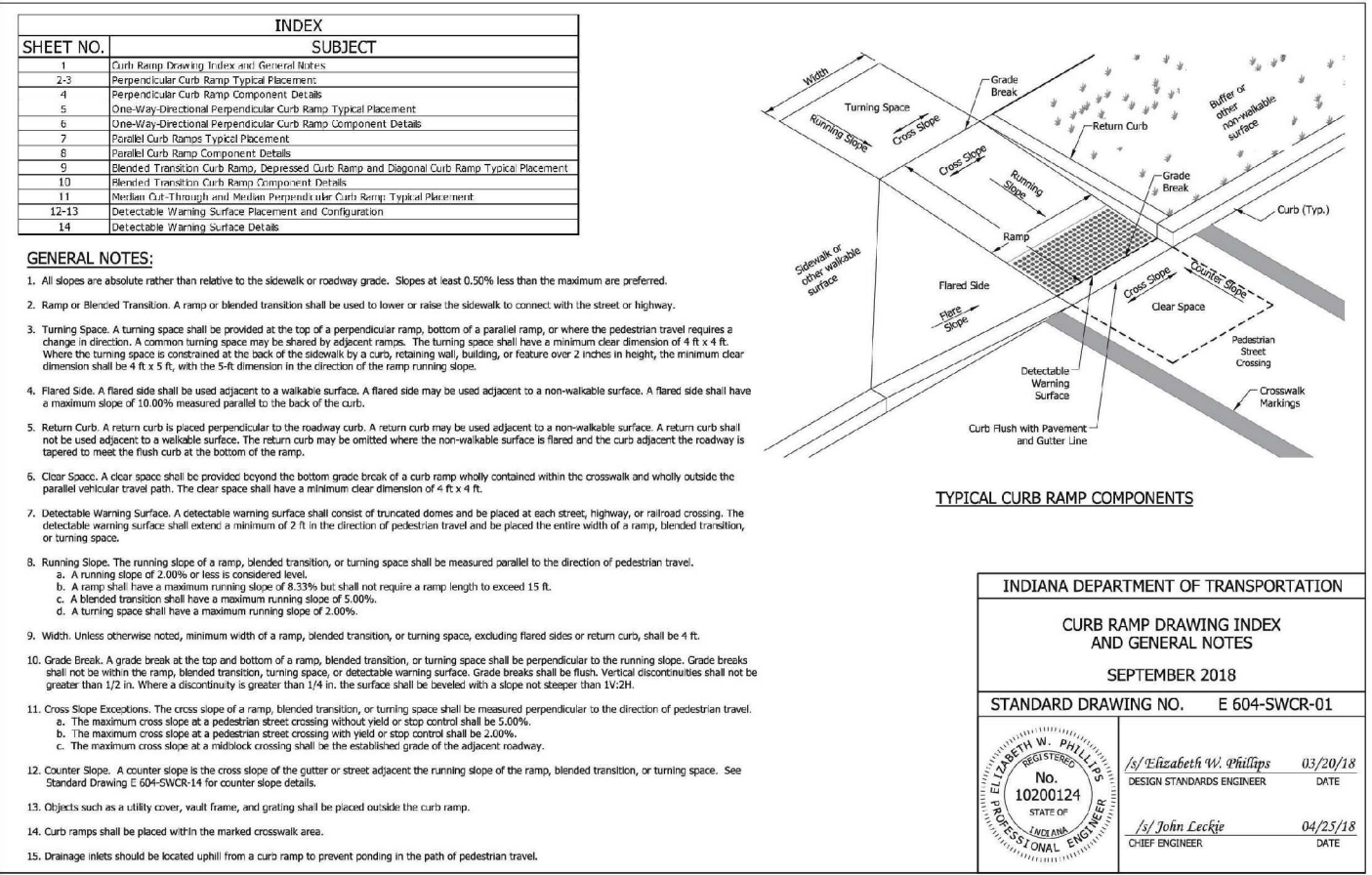
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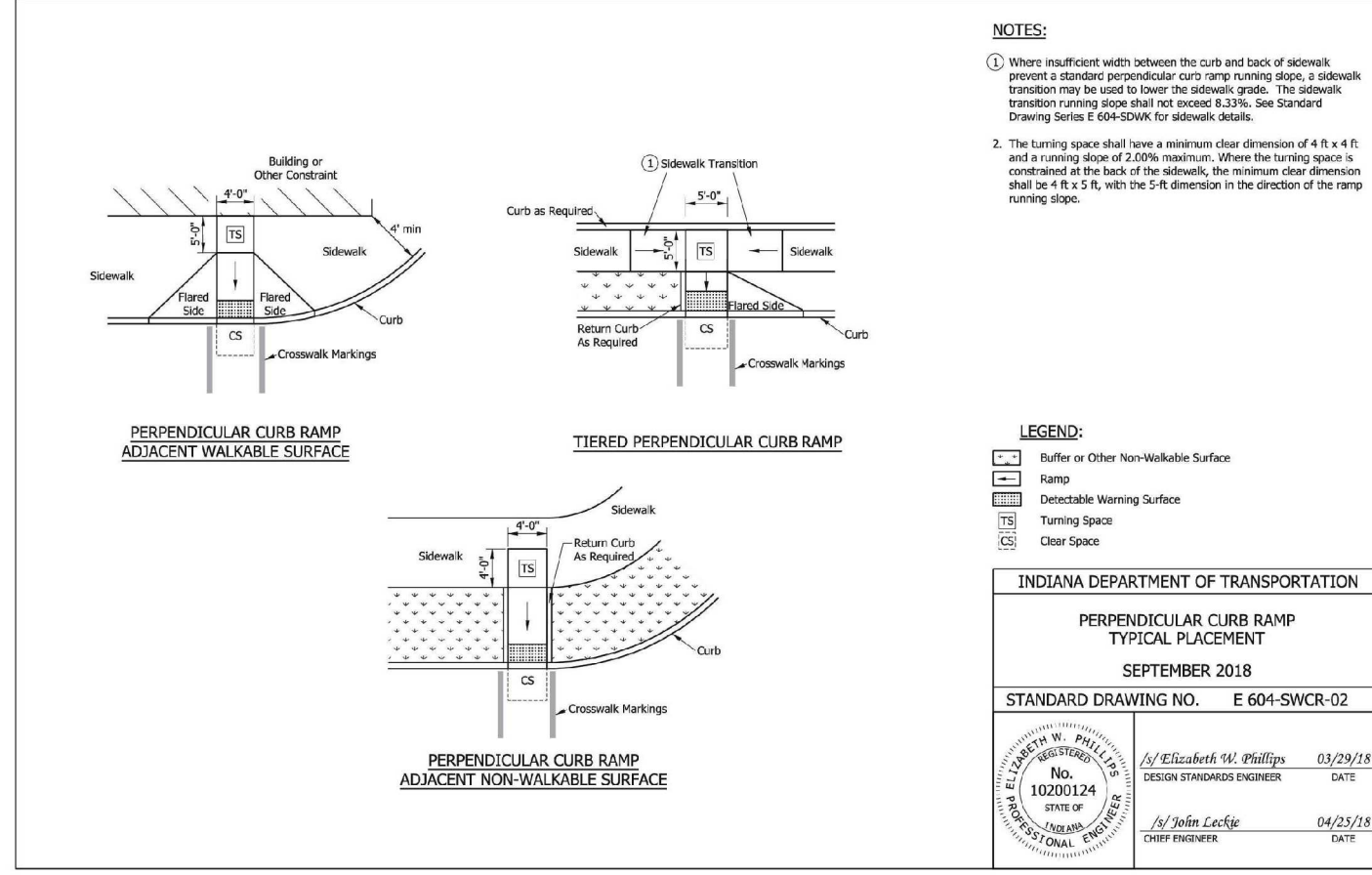
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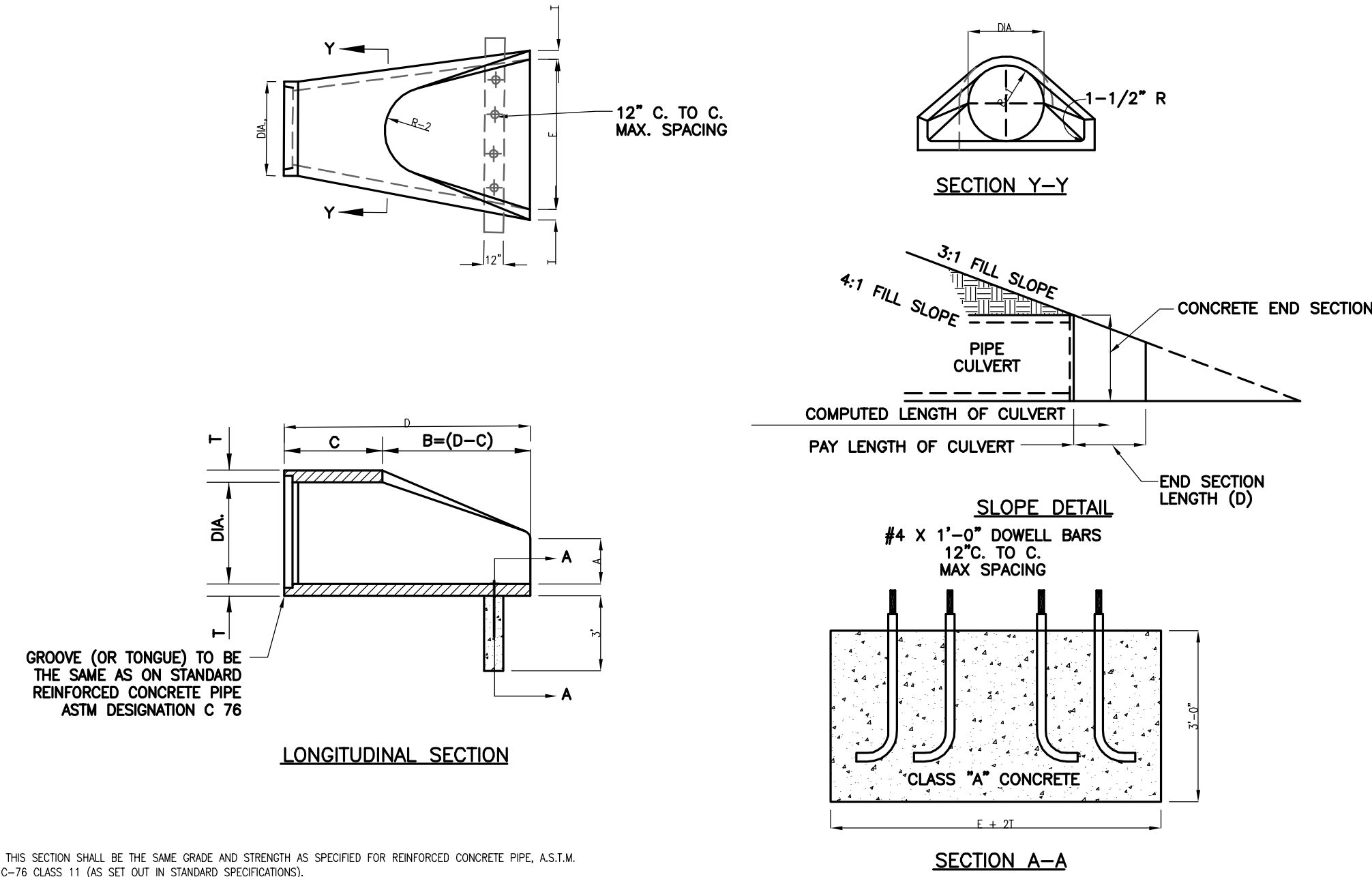
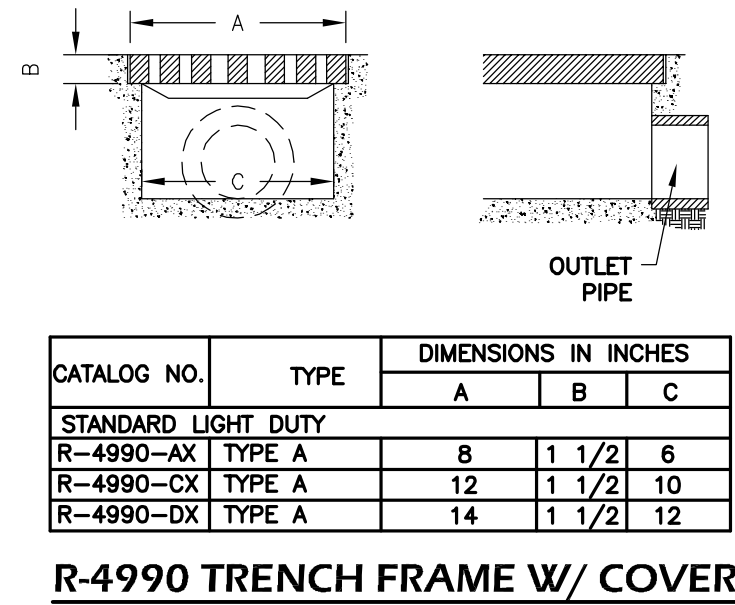
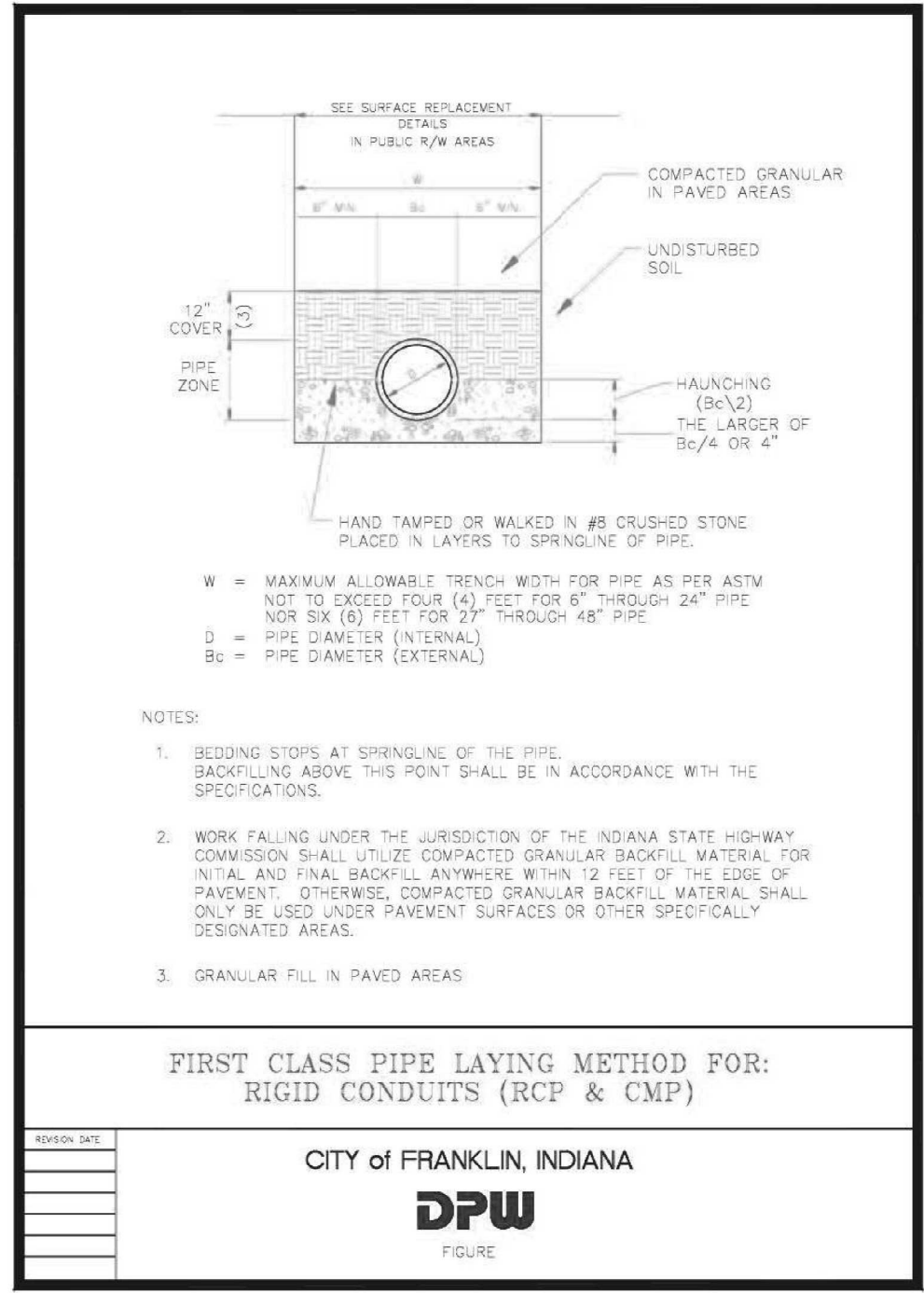


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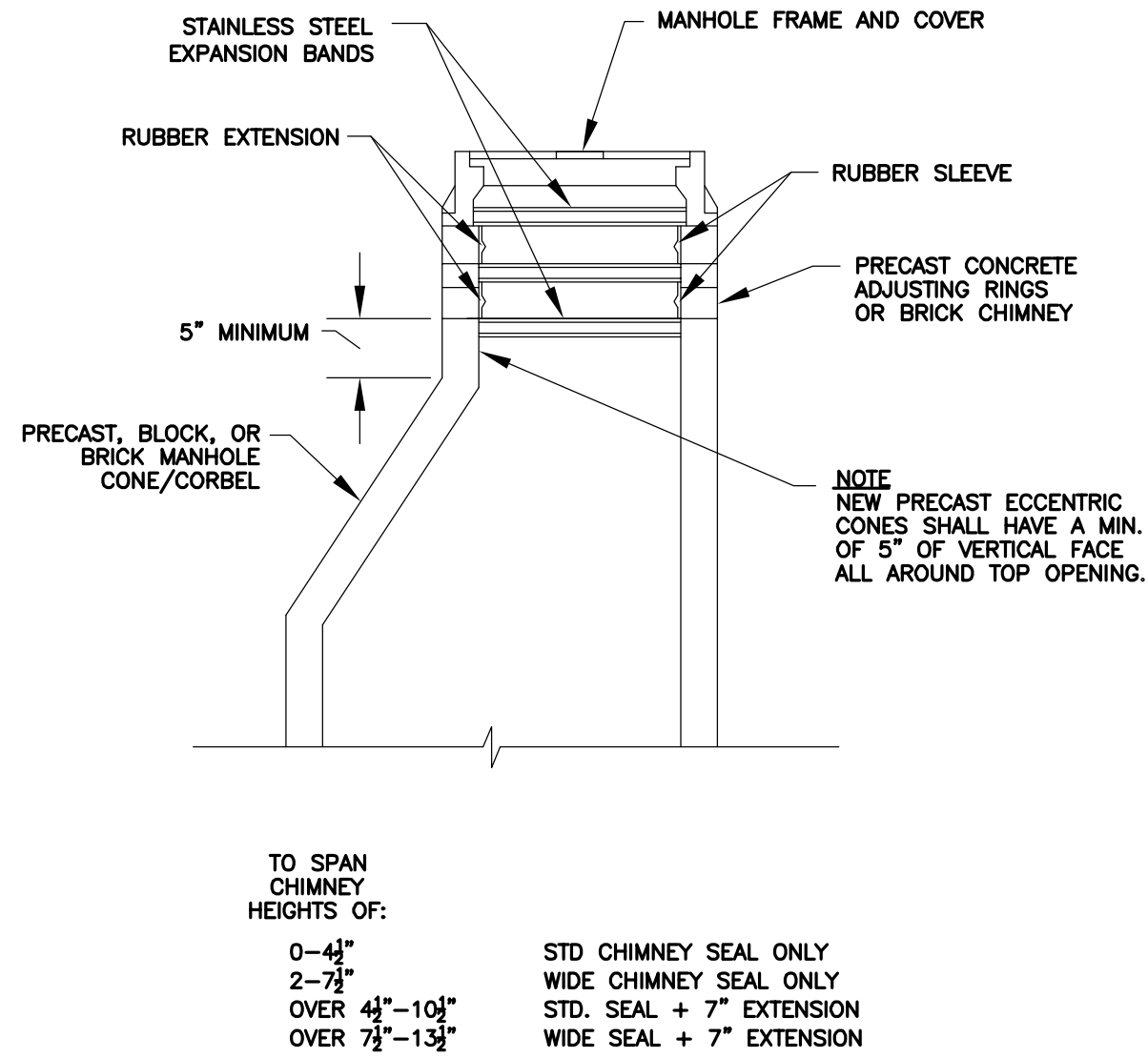
DATE	REVISION	SYMBOL	SCALE	PROJECT	TITLE
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			DRAWN	JPH	
			CHECKED	JKS	
			CERTIFIED	JKS	

PROJECTS plus
GREENWOOD SURVEYING COMPANY
INDIANA
SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana
(317)-882-5003

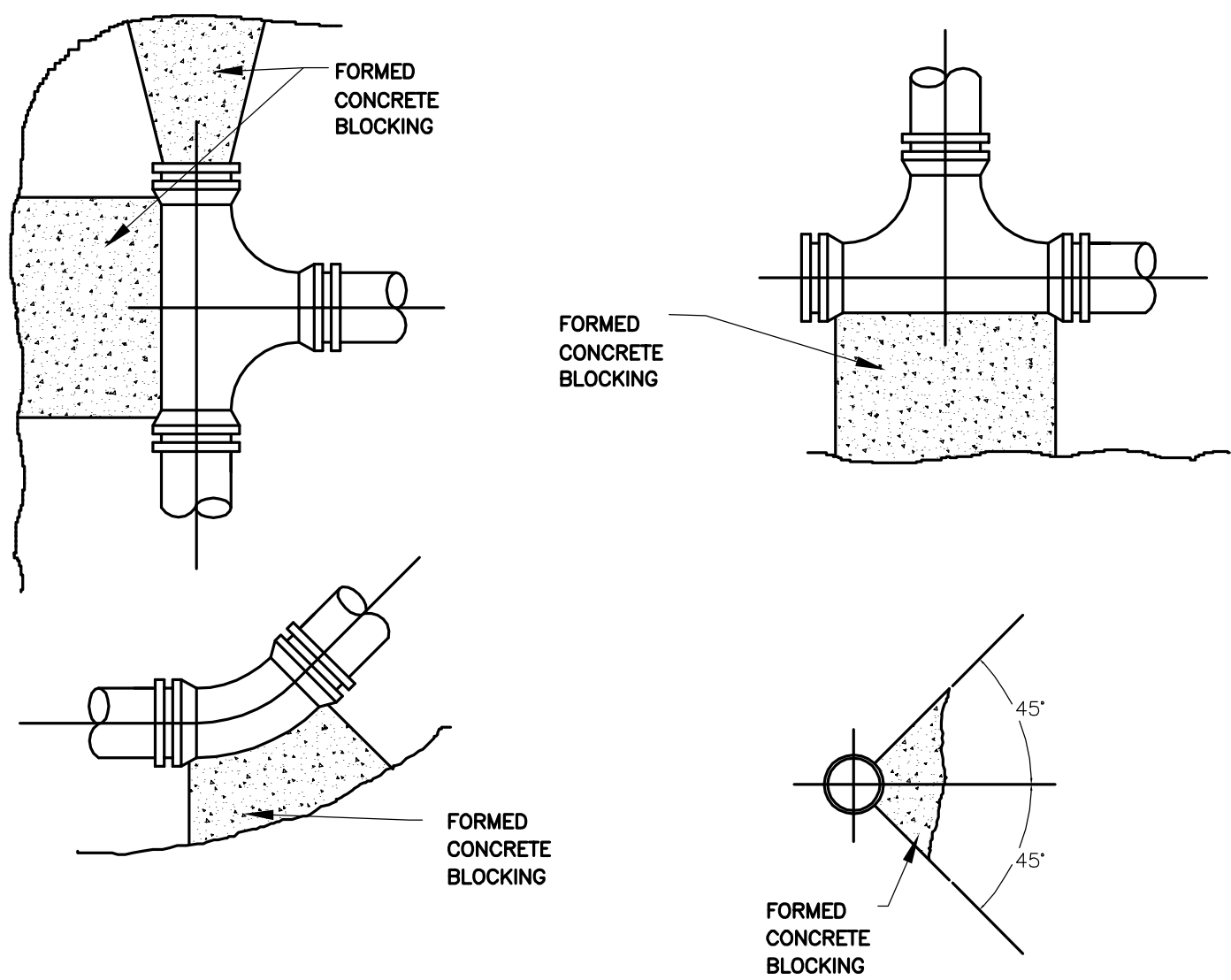
SEAL
JEFFERY K. SMITH
REGISTERED PROFESSIONAL ENGINEER
No. 19419
STATE OF INDIANA
J. Smith
5/3/23
JOB NUMBER
21008.01
SHEET
C702
DATE
MAY 3, 2023



DATE		REVISION		SYMBOL		SCALE	NONE	DRAWN	JPH	CHECKED	JKS	CERTIFIED	JKS
PROJECT													
LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2													
CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA													
TITLE													
SITE DETAILS													
PROJECTS plus GREENWOOD SURVEYING COMPANY													
SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT 1257 Airport Parkway, Suite A - Greenwood, Indiana 46143 (317)-882-5003													
SEAL													
JEFFERY K. SMITH REGISTERED PROFESSIONAL ENGINEER No. 19419 STATE OF INDIANA 5/13/23													
JOB NUMBER 21008.01 SHEET													
C703													
DATE MAY 3, 2023													



TYPICAL CHIMNEY SEAL DETAIL



AREA IN SQ. FT. REQUIRED FOR CONC. THRUST BLOCKING

SIZE	TEE & PLUG	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	2.0	2.5	1.5	1.0	1.0
6"	4.0	5.5	3.0	1.5	1.0
8"	6.5	9.0	5.0	2.5	1.5
10"	10.0	14.0	7.5	4.0	2.0
12"	14.0	20.0	11.0	5.5	3.0

NOTE: THE THRUST BLOCK AREAS ARE BASED ON A SOIL BEARING LOAD OF 2000 LBS./SQ. FT. GREASE ALL PIPE SURFACES PRIOR TO PLACEMENT OF CONCRETE.

THRUST BLOCKING DETAILS FOR FORCE MAIN

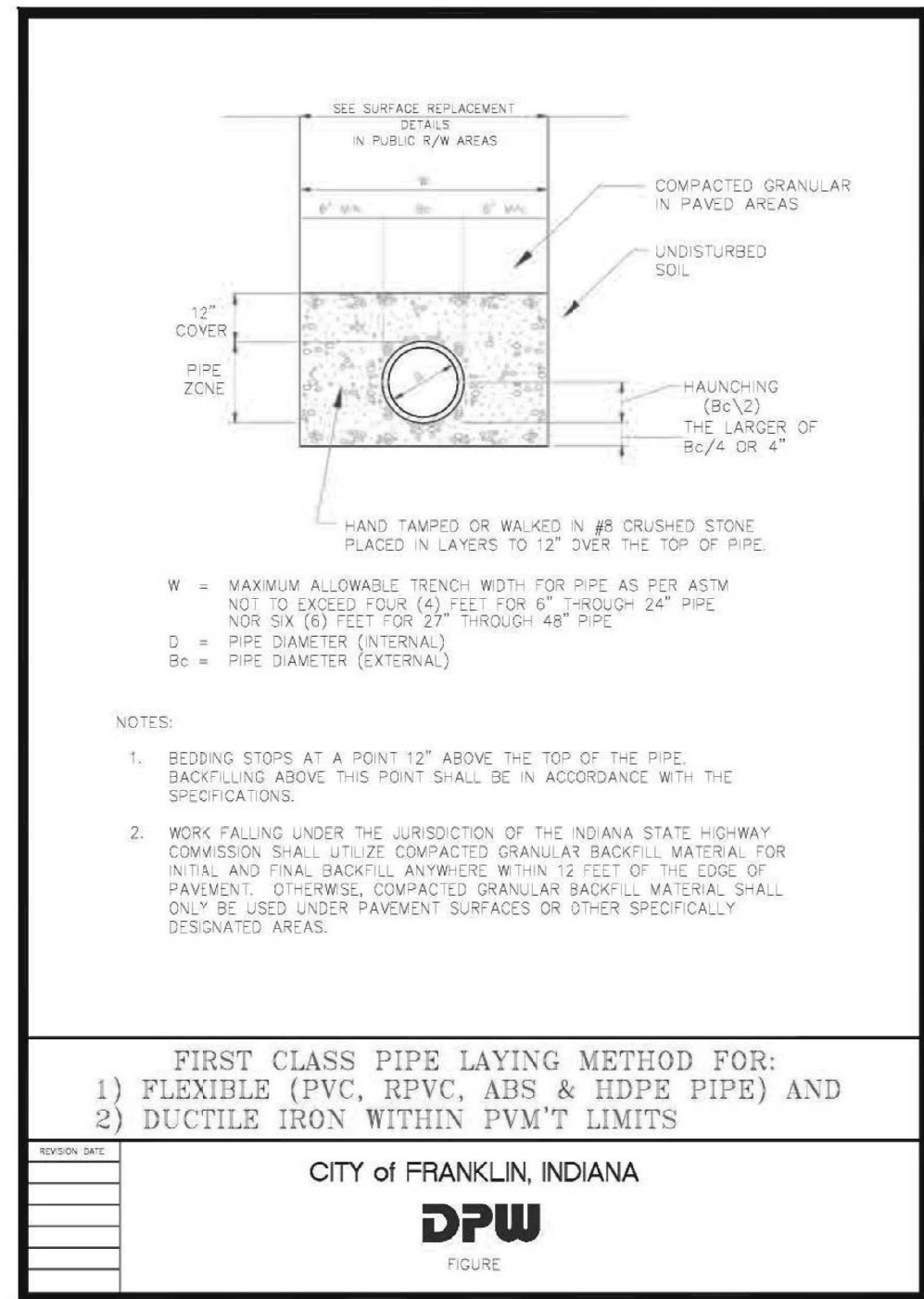
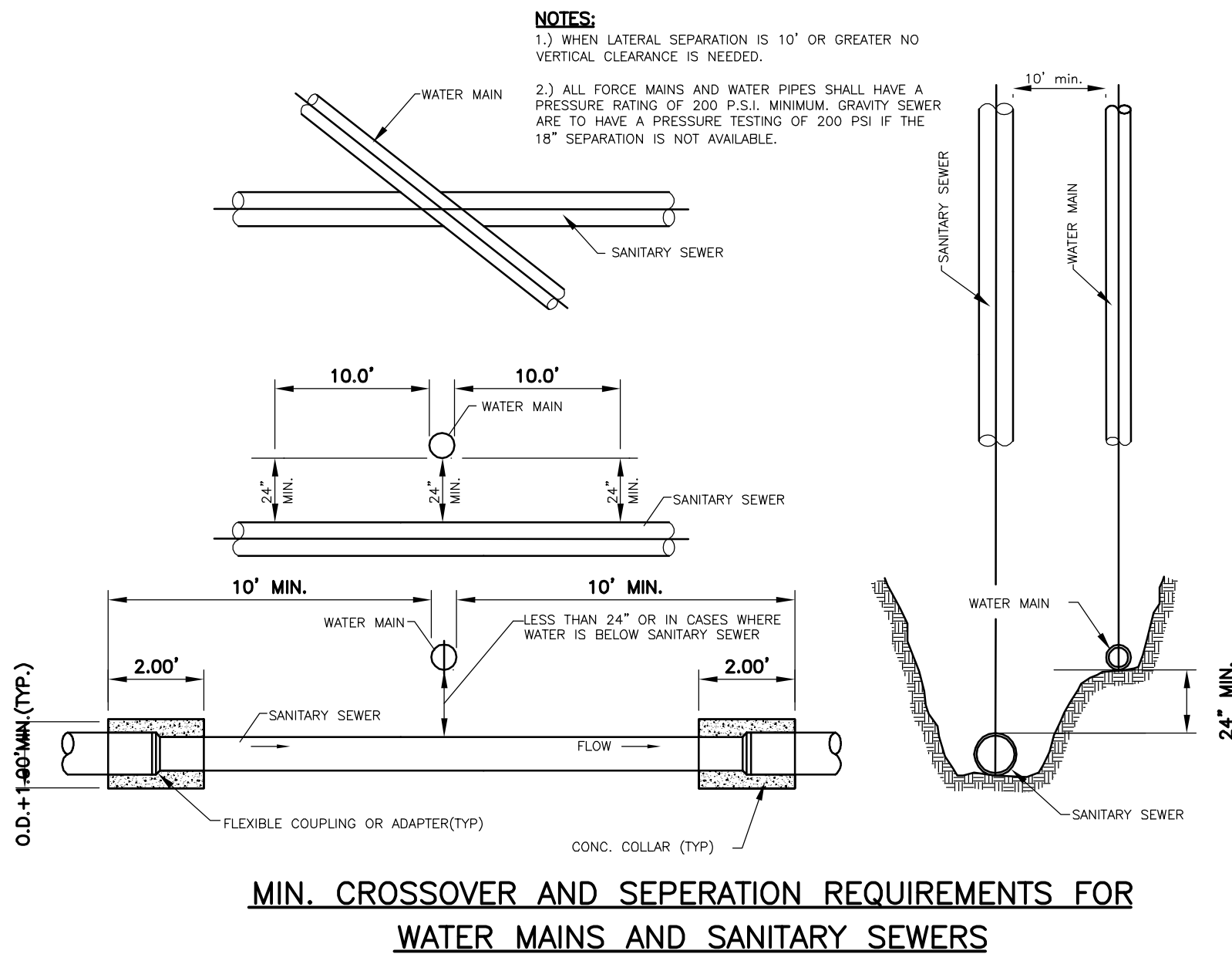
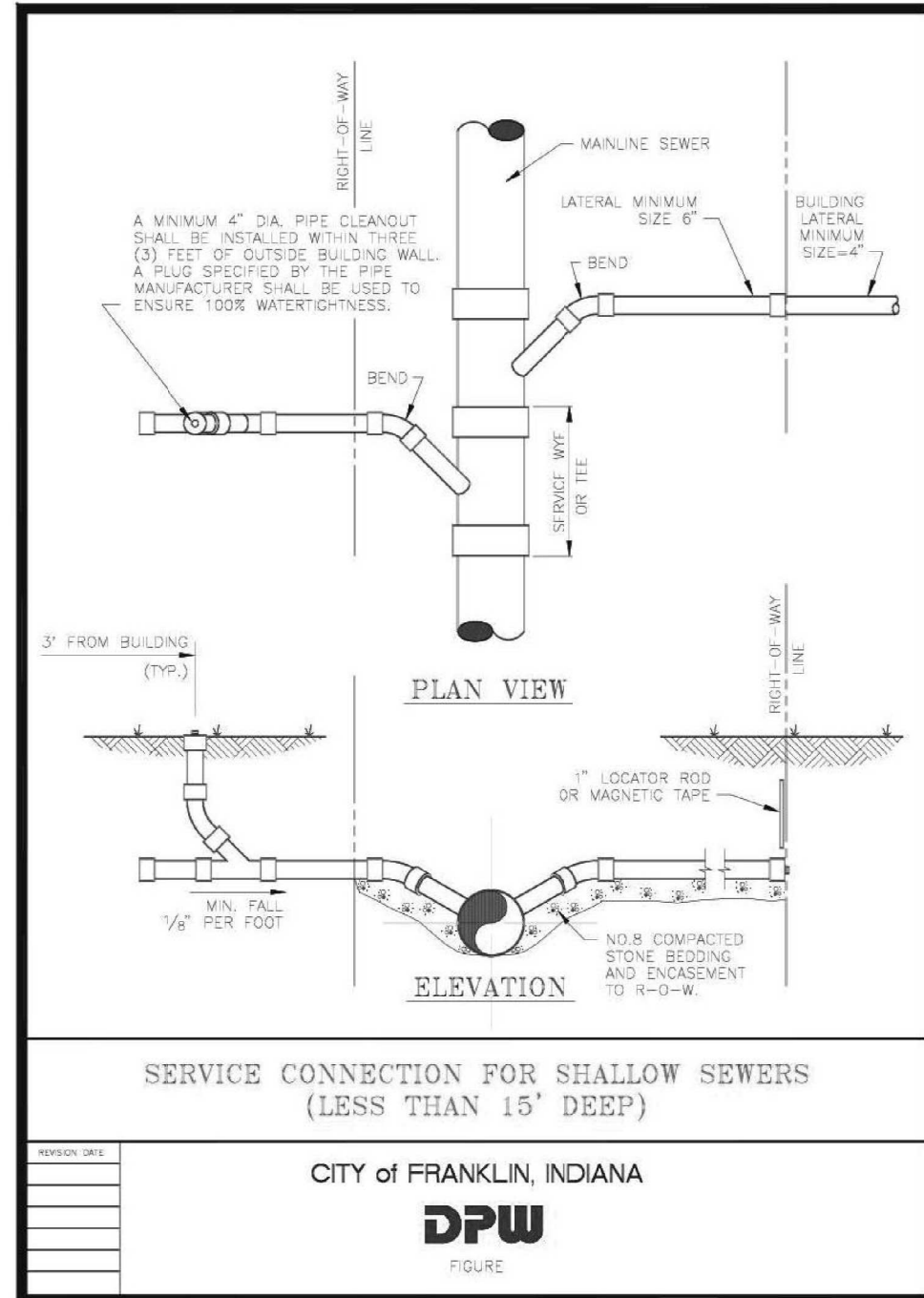
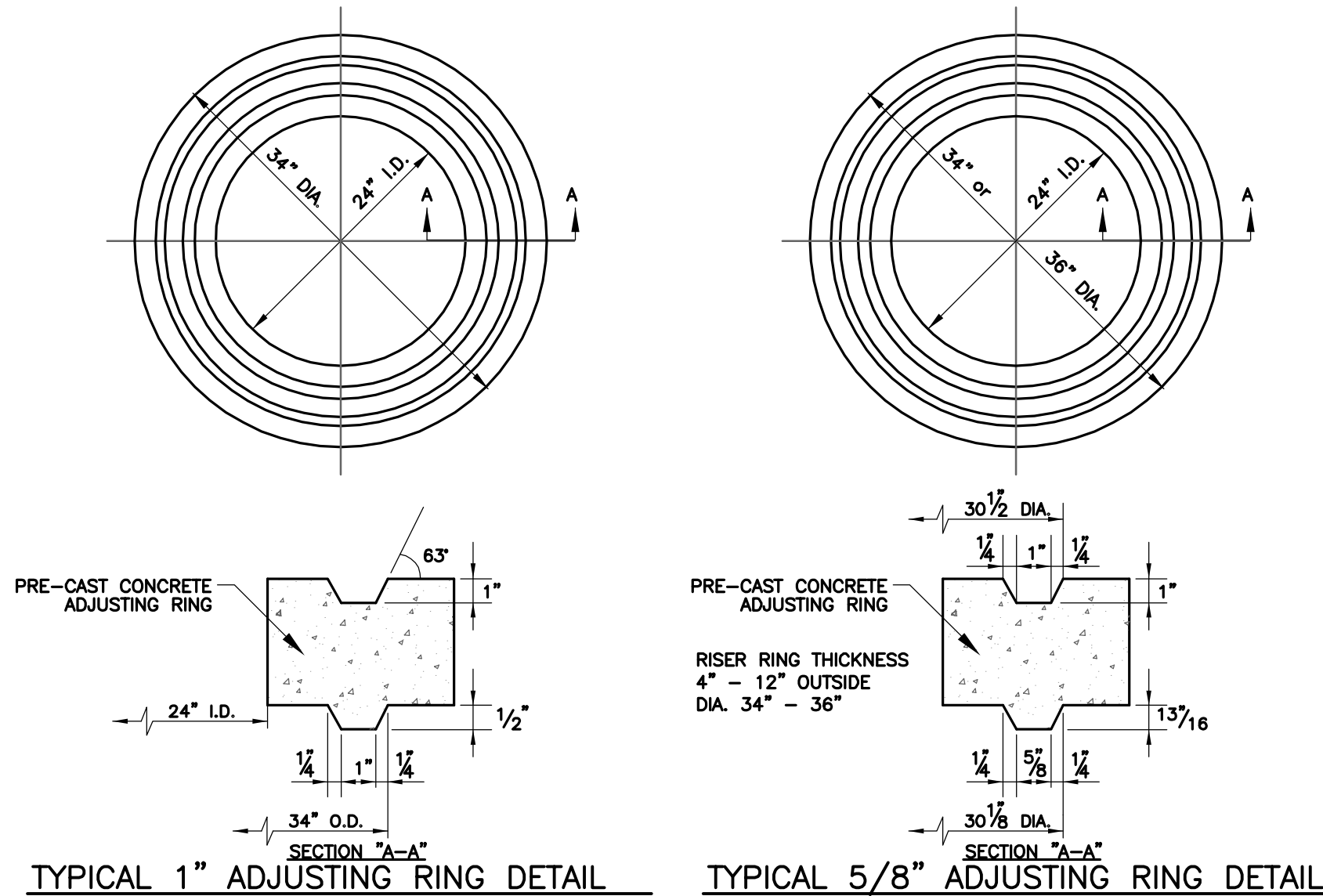


Illustration 7-1

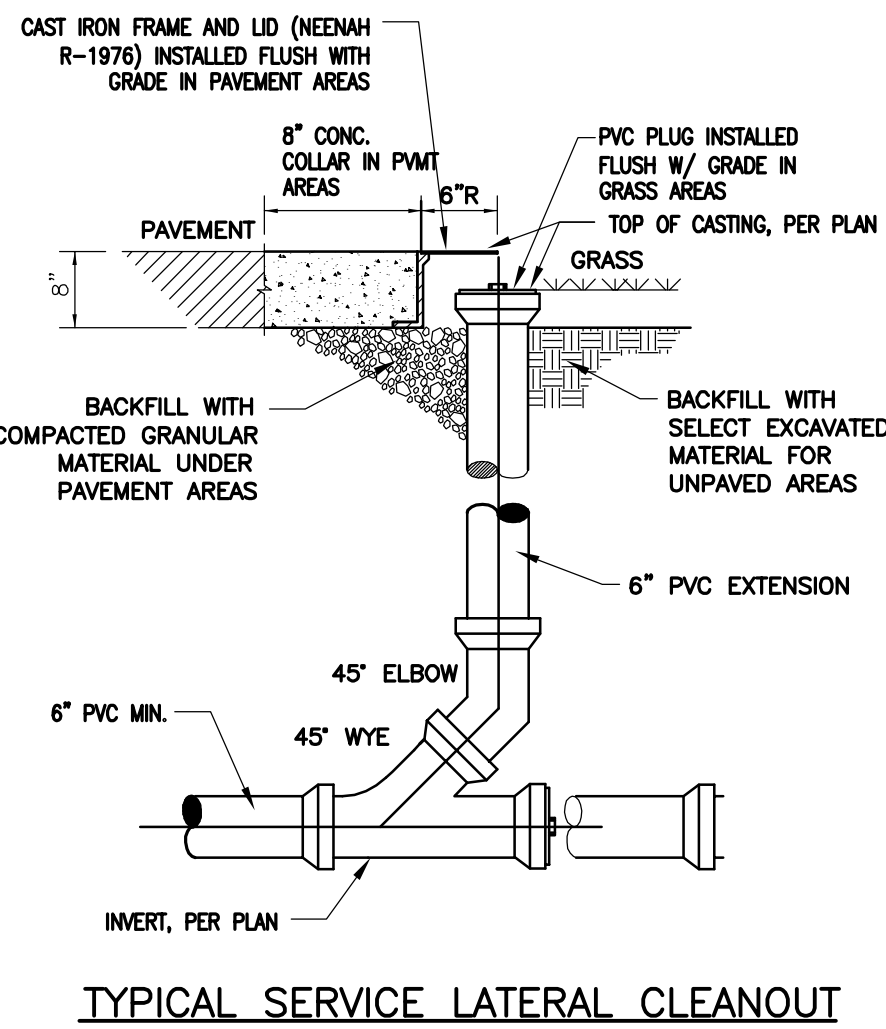


MIN. CROSSOVER AND SEPERATION REQUIREMENTS FOR WATER MAINS AND SANITARY SEWERS

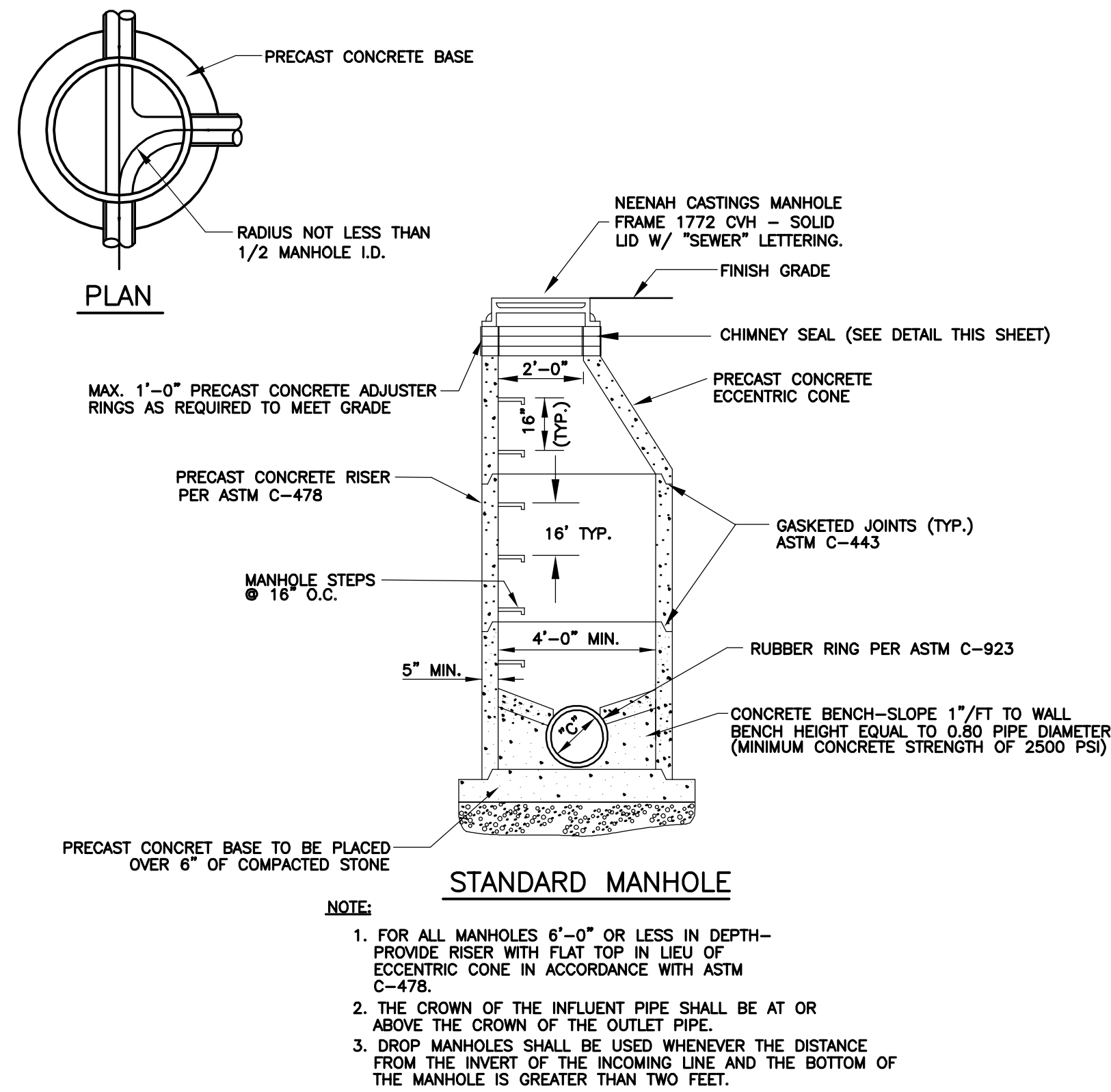
NOTE: CONTRACTOR TO COMPLY WITH 327-3-6-9.
NOTE: THE OUTSIDE OF THE WATERMAIN IS TO BE PLACED GREATER THAN 8 FEET FROM THE OUTSIDE OF A MANHOLE.



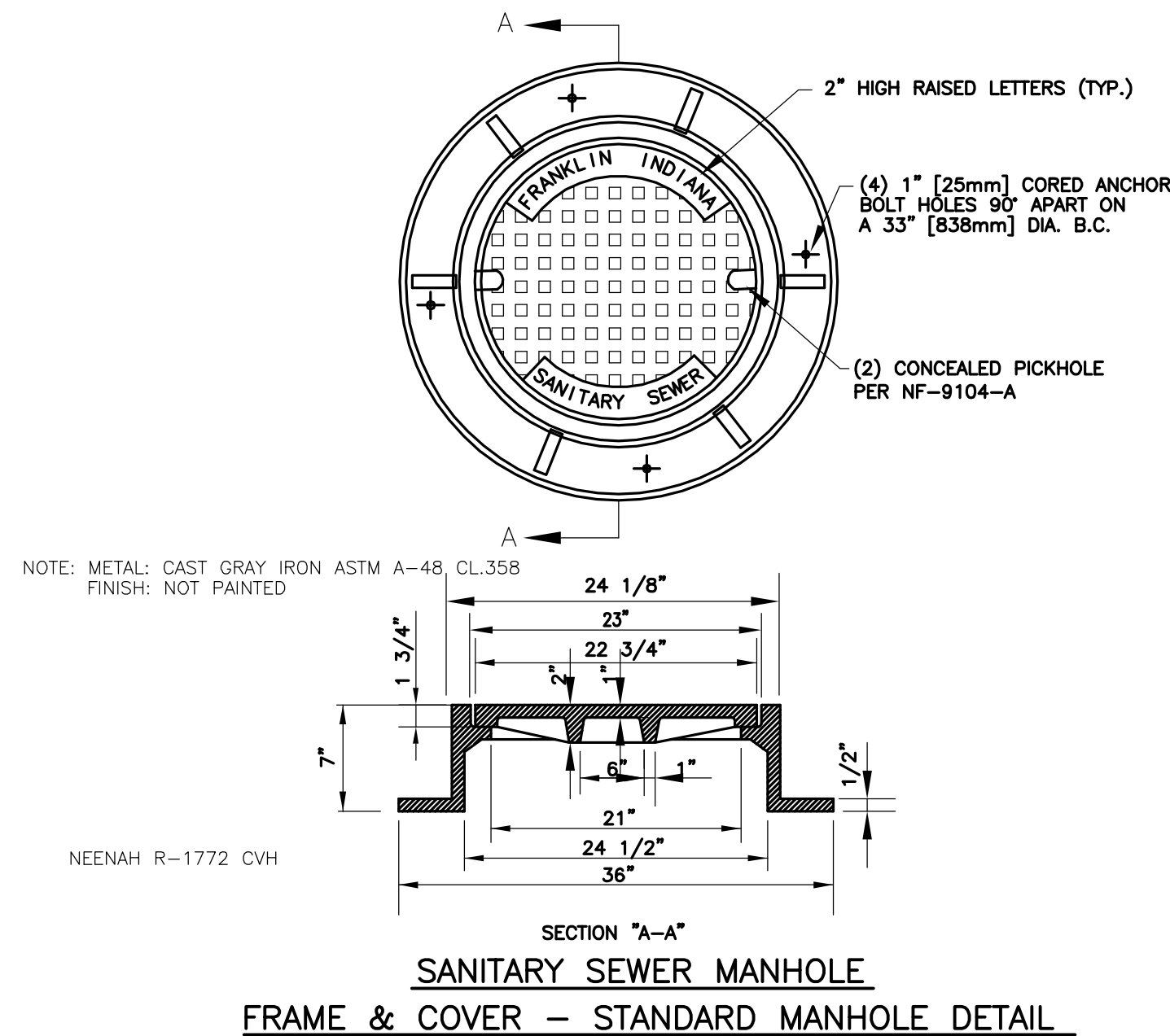
TYPICAL 5/8" ADJUSTING RING DETAIL



TYPICAL SERVICE LATERAL CLEANOUT



NOTE:
1. FOR ALL MANHOLES 6'-0" OR LESS IN DEPTH- PROVIDE RISER WITH FLAT TOP IN LIEU OF ECCENTRIC CONE IN ACCORDANCE WITH ASTM C-478.
2. THE CROWN OF THE INFLUENT PIPE SHALL BE AT OR ABOVE THE CROWN OF THE OUTLET PIPE.
3. DROP MANHOLES SHALL BE USED WHENEVER THE DISTANCE FROM THE INVERT OF THE INCOMING LINE AND THE BOTTOM OF THE MANHOLE IS GREATER THAN TWO FEET.



SANITARY SEWER MANHOLE FRAME & COVER - STANDARD MANHOLE DETAIL

DATE		REVISION		SYMBOL		SCALE	
						NONE	
						DRAWN	JPH
						CHECKED	JKS
						CERTIFIED	JKS

PROJECT: LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK - LOT #2
CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

TITLE: SANITARY SEWER DETAILS

PROJECTS plus
GREENWOOD SURVEYING COMPANY

SITE ENGINEERING-LAND SURVEYING-CONSTRUCTION LAYOUT
1257 Airport Parkway, Suite A - Greenwood, Indiana 46143
(317)-882-5003

SEAL
JEFFERY K. SMITH
REGISTERED
No. 19419
STATE OF INDIANA
PROFESSIONAL ENGINEER
Jeffery K. Smith
5/13/23

JOB NUMBER: 21008.01
SHEET: C704
DATE: MAY 3, 2023

SECTION 2 - MATERIAL HANDLING AND SPILL PREVENTION PLAN

MATERIAL HANDLING AND SPILL PREVENTION PLAN
IN ORDER TO MINIMIZE THE RELEASE OF POTENTIAL POLLUTANTS DURING CONSTRUCTION THE CONTRACTORS SHALL IMPLEMENT THIS MATERIAL HANDLING AND SPILL PREVENTION PLAN. THE CONTRACTOR SHALL REVIEW THIS PLAN WITH ALL SUBCONTRACTORS AND REQUIRE THAT THEY IMPLEMENT THE PLAN AS WELL.

1. CONSTRUCTION EQUIPMENT

A. FUELING, LUBRICATION AND FLUIDS: ALL OPERATIONS INVOLVING THE ADDITION OF FLUIDS TO EQUIPMENT SHOULD BE DONE IN ONE LOCATION, AS DESIGNATED BY THE GENERAL CONTRACTOR, OR DEVELOPER/OWNER, SO THAT SPILLS ARE LIMITED TO ONE LOCATION ON THE SITE, WHICH WILL FACILITATE THE CLEANUP OF SPILLS. IF AN ONSITE-FUELING TANK IS PLANNED TO BE ON SITE, IT SHALL BE DOUBLE WALLED AND STORED IN THIS DESIGNATED AREA. THIS LOCATION IS AN AREA THAT WILL NOT ALLOW SPILLED FLUIDS TO MIGRATE INTO SUBSURFACE SOILS. IN THE EVENT OF A SPILL, THE FLUID SHALL IMMEDIATELY BE CLEANED UP BY REMOVING THE CONTAMINATED SOIL OR STONE, WHICH SHALL BE DISPOSED OF IN AN ACCEPTABLE MANNER. SPILLS ON HARD SURFACES SHALL BE SOAKED UP BY AN ACCEPTABLE MATERIAL SUCH AS OIL DRY AND THE ABSORBENT MATERIAL DISPOSED OF IN A PROPER MANNER. THE SPILL SHALL ALSO BE REPORTED IMMEDIATELY TO THE CONTRACTOR'S SUPERINTENDENT.

B. EQUIPMENT REPAIR, ESPECIALLY WHEN FLUIDS MUST BE REMOVED FROM THE EQUIPMENT OR THE POSSIBILITY OF FLUID SPILLS IS HIGH, SHOULD ALWAYS BE DONE OFFSITE AT A FACILITY THAT IS MORE SUITABLE THAN A CONSTRUCTION SITE TO HANDLE SPILLS. WHEN EQUIPMENT MUST BE REPAIRED ONSITE IT SHOULD BE MOVED TO THE MAINTENANCE AND FUELING AREA IF POSSIBLE. OTHERWISE, SUITABLE ON SITE CONTAINERS SHOULD BE PLACED UNDER THE EQUIPMENT DURING REPAIR TO CATCH ANY SPILLED FLUIDS AND THESE FLUIDS SHOULD BE DISPOSED OF IN A PROPER MANNER.

C. ALL REUSABLE FLUID CONTAINERS, SUCH AS GASOLINE CANS, SHALL BE INSPECTED FOR LEAKS EACH TIME THEY ARE USED. IF LEAKS ARE FOUND, THE FLUID SHALL BE REMOVED FROM THE CONTAINER IN A PROPER MANNER AND THE CONTAINER DISPOSED OF IN AN ACCEPTABLE MANNER. EMPTY DISPOSABLE CONTAINER, SUCH AS GREASE TUBES AND LUBRICATING OIL AND BRAKE FLUID CONTAINERS, AND THEIR PACKAGING, SHALL BE DISPOSED OF IN A PROPER MANNER AND SHALL NOT BE LEFT ON THE GROUND OR IN THE OPEN ON THE CONSTRUCTION SITE.

2. CONSTRUCTION MATERIALS AND THEIR PACKAGING

A. EROSION CONTROL MEASURE SHOWN ON THE SUBJECT PROJECT SHALL BE IMPLEMENTED PRIOR TO AND DURING CONSTRUCTION IN THE PROPER SEQUENCE TO MINIMIZE SOIL EROSION. EROSION CONTROLS SHALL BE INSPECTED AND MAINTAINED AS DESCRIBED ELSEWHERE ON THE PLANS. EXCESSIVE DUSTING OF SOIL ON THE SITE SHALL BE MINIMIZED BY REDUCING CONSTRUCTION TRAFFIC ACROSS BARE SOIL DURING DRY AND/OR WINDY WEATHER, AND BY APPLYING WATER OR OTHER ACCEPTABLE DUST CONTROL MEASURES TO THE SOIL. UPON COMPLETION OF CONSTRUCTION AND SUITABLE ESTABLISHMENT OF PERMANENT VEGETATION, TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE, CHECK DAMS AND INLET PROTECTION DEVICES SHALL BE REMOVED IN A MANNER TO MINIMIZE ADDITIONAL LAND DISTURBANCE. ANY AREAS DISTURBED BY THESE OPERATIONS SHALL BE PROPERLY REVEGETATED.

B. LARGE WASTE MATERIALS CREATED BY CUTTING, SAWING, DRILLING, OR OTHER OPERATIONS SHALL BE PROPERLY DISPOSED OF IN SUITABLE WASTE CONTAINERS. THE SITE SHALL BE CHECKED AT THE END OF THE DAY, AS A MINIMUM, FOR WASTE MATERIALS, INCLUDING THOSE BLOWN ACROSS OR OFF THE SITE BY WIND. WASTE SHALL BE PICKED UP AND DISPOSED OF IN SUITABLE CONTAINERS, WHERE POSSIBLE, OPERATIONS SUCH AS SAWING THAT CREATE SMALL PARTICLES SHOULD BE PERFORMED IN ONE SPOT IN AN AREA PROTECTED FROM WIND, AND WASTE PARTICLES COLLECTED AND DISPOSED OF FREQUENTLY TO MINIMIZE WIND DISPERSAL.

C. PACKAGING USED TO TRANSPORT MATERIALS TO THE SITE FOR CONSTRUCTION OF THE FACILITY SHALL BE DISPOSED OF PROPERLY, WEATHER THE MATERIAL IS TAKEN OUT OF ITS PACKAGE AND INCORPORATED INTO THE PROJECT IMMEDIATELY OR STORED ONSITE FOR FUTURE USE. PACKAGED MATERIALS STORED ONSITE SHALL BE INSPECTED REGULARLY AND ANY LOOSE PACKAGING SHALL BE REPAIRED OR DISPOSED OF PROPERLY.

D. ALL DEWATERING OF ACTIVITIES SHALL BE DONE IN ACCORDANCE TO GOOD EROSION CONTROL PRACTICES. THESE PRACTICES SHOULD INCLUDE THE USE OF DIRT BAGS SUCH AS DANDY DIRT BAGS. THE USE OF THESE TYPES OF DEWATERING DEVICES WILL REMOVE LARGE QUANTITIES OF SILT, SEDIMENT, AND DIRT AND PREVENT THESE MATERIALS TO ENTER THE STORM SEWER SYSTEM.

E. IF THE USE OF LIME IS USED TO STABILIZE THE SOIL OF THE SITE THEN ALL CONSTRUCTION EQUIPMENT USED SHALL BE CLEANED OF ALL EXCESS MATERIAL WITH WATER IN THE MAINTENANCE AND REFUELING AREA AS SHOWN WITHIN THESE PLANS.

F. NUTRIENTS AND FERTILIZERS SHALL ONLY BE USED TO ESTABLISH RAPID VEGETATION. WHEN THESE PRODUCTS ARE UTILIZED, THE USER SHOULD PAY STRICT ATTENTION TO THE PRODUCTS RECOMMENDED USAGE.

3. CONCRETE WASTE WATER

A. ALL CONCRETE WASTEWATER SHALL BE DISPOSED OF IN THE DESIGNATED AREA AS DIRECTED BY THE GENERAL CONTRACTOR OR DEVELOPER/OWNER. THIS AREA IS TO BE A 3' DEEP, 10' SQUARE PIT AS DETAILED ON THE EROSION CONTROL PLAN. THIS AREA SHALL BE INSPECTED ON A DAILY BASIS ON A MINIMUM. WHEN THIS AREA BECOMES FULL, THE POLLUTANTS SHALL BE EXCAVATED, PLACED IN AN ACCEPTABLE CONTAINER AND DISPOSED OF IN PROPER MANNER.

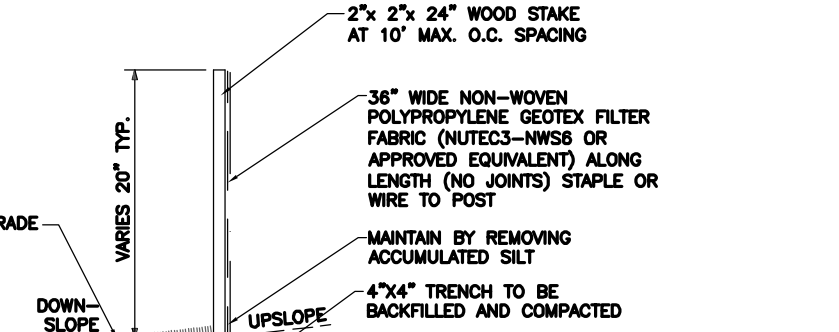
B. ALL EXCESS PAINT AND THEIR RELATED PRODUCTS SHALL BE DISPOSED OF IN THE MANNER AT WHICH THE MANUFACTURER SUGGESTS. UNDER NO CIRCUMSTANCES WILL PAINT OR THEIR RELATED PRODUCTS BE CLEANED OR DISPOSED OF IN SOIL, SANITARY SEWERS, STORM SEWERS OR DETENTION BASINS. ANY VIOLATION OF THIS SHALL BE REPORTED TO THE JOB SUPERINTENDENT.

IN THE EVENT OF ACCIDENTALLY CONTAMINATION ALL EFFORTS SHOULD BE MADE TO REMOVE CONTAMINANTS IN AN APPROPRIATE MANNER. THE JOHNSON COUNTY FIRE DEPARTMENT SHOULD BE CONTACTED IMMEDIATELY TO DETERMINE IF FURTHER MEASURES ARE NEEDED.

PERMANENT SEEDING SPECIFICATIONS:

- 1) ALL DISTURBED LAWN AREAS SHALL RECEIVE PERMANENT SEEDING IMMEDIATELY.
- 2) ALL DISTURBED LAWN AREA TO HAVE A MINIMUM OF 6 INCHES OF TOPSOIL (COMPACTED THICKNESS).
- 3) TOPSOIL TO BE FERTILE, FRABLE, FERTILE, SANDY, DAM REASONABLE, CLAY LUMPS, STONES LARGER THAN 1/2", EXCESSIVE QUANTITIES OF SMALL STONE/GRAVEL, BRUSH AND OTHER LITER.
- 4) SOLVE ANY SURFACE OR SUBSURFACE DRAINAGE PROBLEMS AND CONSTRUCT PERMANENT EROSION CONTROL STRUCTURES.
- 5) PERFORM THE MAJOR FILLING, SHAPING AND SMOOTHING OF GULLIES OR ERODED AREAS.
- 6) HAVE TOPSOIL TESTED TO CHECK PH AND NUTRIENT LEVELS. PROVIDE FERTILIZER AND SOIL AMENDMENTS AS REQUIRED TO MEET/EXCEED MINIMUM REQUIREMENTS AS SUGGESTED ON SOILS TEST RESULTS FOR LAWNS.
- 7) WORK FERTILIZER AND SOIL NUTRIENTS INTO TOP 2-3 INCHES OF THE TOPSOIL WITH A SMALL DISK, HARROW OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.
- 8) ROLL THE TOPSOIL WITH A WATER BALLAST ROLLER WEIGHING 100 TO 300 POUNDS DEPENDING ON SOIL TYPE.
- 9) RAKE OR SCARIFY AND CUT OR FILL IRREGULARITIES THAT DEVELOP AS REQUIRED AND AGAIN ROLL UNTIL AREA IS TRUE AND UNIFORM, FREE FROM LUMPS, DEPRESSIONS AND IRREGULARITIES.
- 10) SOW SEED WITH ADEQUATE EQUIPMENT AT A TIME WHEN LITTLE OR NO WIND IS BLOWING. BROADCAST HALF OF SEED IN ONE DIRECTION AND THE OTHER HALF IN THE OPPOSITE DIRECTION (RIGHT ANGLES).
- 11) COVER SEED TO A DEPTH OF 1/4" BY RAKING OR HARROWING. PROVIDE A LIGHT LAYER OF STRAW OR HAY MULCH AT A RATE OF 2 TONS PER ACRE. APPLY TACKIFIER TO STABILIZE MULCH.
- 12) HYDROSEEDING IS ACCEPTABLE METHOD OF SEEDING.
- 13) KEEP TOPSOIL RELATIVELY MOIST UNTIL LAWN IS ESTABLISHED.
- 14) RESEED AREAS THAT DO NOT SHOW PROMPT GERMINATION AT 14 DAY INTERVALS UNTIL AN ACCEPTABLE STAND OF GRASS IS ASSURED.
- 15) ALL LAWNS SHALL BE GUARANTEED TO HAVE A FULL UNIFORM STAND OF ACCEPTABLE GRASS AT END OF ONE YEAR GUARANTEE PERIOD WITH NO BARE SPOTS COMPRISING MORE THAN 2% OF ANY LAWN AREA. ANY AREA SO NOTED WILL BE REWORKED UNTIL AN ACCEPTABLE STAND OF GRASS IS ESTABLISHED.
- 16) ALL LAWNS TO BE MAINTAINED UNTIL FINAL INSPECTION BY LANDSCAPE DESIGNER BUT NOT LESS THAN 60 DAYS AFTER TIME OF INSTALLATION. MAINTENANCE TO INCLUDE CULTIVATION, MULCHING, MOWING AND ALL OTHER NECESSARY OPERATIONS REQUIRED FOR PROPER ESTABLISHMENT OF LAWN.

FILTER FENCE INSTALLATION DETAIL



LEGEND :

- FF FILTER FENCE
- TS TEMPORARY SEEDING
- DI DROP INLET PROTECTION
- SP STOCKPILE PROTECTION
- GRAVEL CONSTRUCTION ENTRANCE

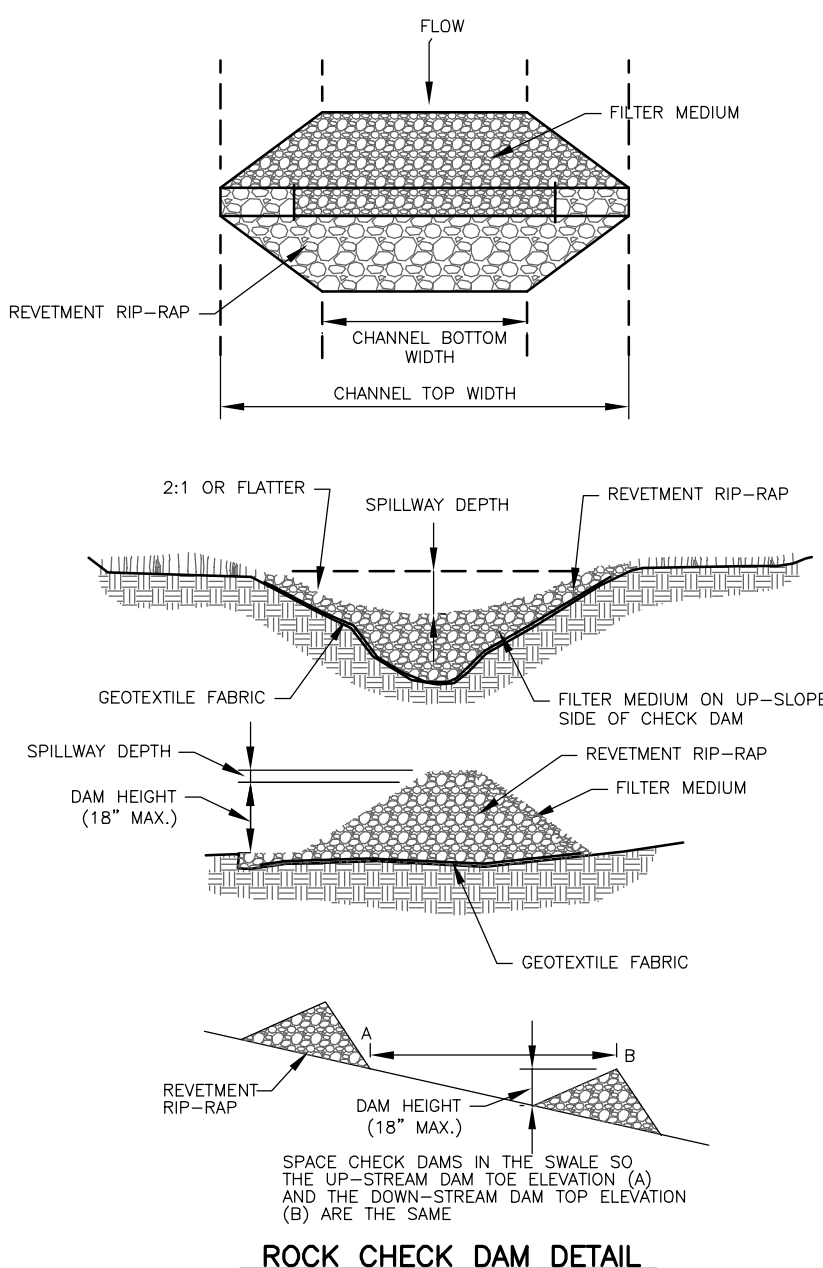
INDIVIDUAL LOT EROSION PLAN

INDIVIDUAL LOT EROSION NOTES :

1. ALL EROSION CONTROL MEASURE SHALL BE IN COMPLIANCE WITH THE INDIANA STORM WATER QUALITY MANUAL - PLANNING AND SPECIFICATIONS GUIDE FOR EFFECTIVE EROSION AND SEDIMENT CONTROL AND POST-CONSTRUCTION WATER QUALITY, OCTOBER 2007.

2. THE SILT FENCE AND APPROPRIATE EROSION CONTROL SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. LOCATION OF SILT FENCE TO APPROVED BY CITY.

3. CONCRETE WASHOUT BASIN TO BE AVAILABLE WITHIN SUBDIVISION OR BUILDER WILL NEED TO INSTALL ONE.



SECTION 1 - EMERGENCY RESPONSE NUMBERS

EMERGENCY RESPONSE TO ANY LIFE THREATENING PROBLEM	911
COUNTY FIRE DEPARTMENT	911
COUNTY POLICE DEPARTMENT	911
INDIANA DEPARTMENT OF NATURAL RESOURCES	812-477-8773
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	317-233-7745
JOHNSON COUNTY SOIL AND WATER	317-342-5594

THIS PLAN TO BE USED FOR EROSION CONTROL PURPOSES ONLY. THE CITY/COUNTY ENGINEER HAS THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IN THE FIELD AS CONDITIONS WARRANT.

ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL DATED OCTOBER 2007 BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM).

SOILS TYPE LEGEND

- Br BROOKSTON SILTY CLAY LOAM
THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT ENGINEERING USES OF THIS SOIL ARE A SEASONAL HIGH WATER TABLE, HIGH POTENTIAL FROST ACTION, MODERATE SHRINK-SWELL POTENTIAL, AND MODERATE PERMEABILITY. THIS SOIL HAS SEVERE LIMITATIONS FOR BUILDING SITES. THE SITES NEED TO BE ARTIFICIALLY DRAINED AND PROTECTED FROM FLOODING. DWELLINGS AND SMALL BUILDINGS WITH BASEMENTS SHOULD NOT BE CONSTRUCTED ON THIS SOIL. USING PROPERLY DESIGNED FOUNDATIONS AND FOOTINGS HELPS TO PREVENT STRUCTURAL DAMAGE FROM FROST ACTION AND SHRINKING AND SWELLING OF THE SOIL. THIS SOIL HAS SEVERE LIMITATIONS FOR LOCAL ROADS AND STREETS BECAUSE OF SEASONAL HIGH WATER TABLE AND HIGH POTENTIAL FROST ACTION. INSTALLATION OF DRAINAGE DITCHES ALONG ROADS HELPS TO LOWER THE WATER TABLE AND PREVENT DAMAGE FROM FROST ACTION. THE BASE MATERIAL FOR ROADS AND STREETS SHOULD BE REPLACED OR STRENGTHENED WITH SUITABLE MATERIAL.
- CrA CROSBY SILT LOAM, 0 TO 3 PERCENT SLOPES
THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT ENGINEERING USES OF THIS SOIL ARE MODERATE POTENTIAL FROST ACTION, MODERATE PERMEABILITY IN THE SUBSOIL, RAPID PERMEABILITY IN THE UNDERLYING MATERIAL, AND MODERATE SHRINK-SWELL POTENTIAL. THIS SOIL HAS SLIGHT LIMITATIONS FOR BUILDING SITES AND SEPTIC TANK ABSORPTION FIELDS. IT HAS MODERATE LIMITATIONS FOR LOCAL ROADS AND STREETS BECAUSE OF SHRINK-SWELL POTENTIAL. THE BASE MATERIAL FOR ROADS NEEDS TO BE STRENGTHENED OR REPLACED WITH SUITABLE MATERIAL.
- MnB2 MIAMI SILT LOAM, 2 TO 6 PERCENT SLOPES, ERODED. THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT ENGINEERING USES ARE MODERATE POTENTIAL FROST ACTION, MODERATE SHRINK-SWELL POTENTIAL, AND MODERATELY SLOW PERMEABILITY. THE SOIL HAS SEVERE LIMITATIONS FOR BUILDING SITES AND SEPTIC TANK ABSORPTION FIELDS BECAUSE OF MODERATELY SLOW PERMEABILITY AND SLOPE.
- MnC2 MIAMI SILT LOAM, 6 TO 12 PERCENT SLOPES, ERODED. THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT ENGINEERING USES ARE MODERATE POTENTIAL FROST ACTION, MODERATE SHRINK-SWELL POTENTIAL, AND MODERATELY SLOW PERMEABILITY. THE SOIL HAS SEVERE LIMITATIONS FOR BUILDING SITES BECAUSE OF SLOPE. THIS SOIL HAS SEVERE LIMITATIONS FOR LOCAL ROADS AND STREETS. THIS SOILS HAS SEVERE LIMITATIONS FOR SEPTIC TANK ABSORPTION FIELDS BECAUSE OF MODERATELY SLOW PERMEABILITY AND SLOPE.
- CsB2 CROSBY-MIAMI SILT LOAM
2 TO 4 PERCENT SLOPES. THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT THE ENGINEERING USES OF THIS SOIL ARE A SEASONAL HIGH WATER TABLE, MODERATE SHRINK-SWELL POTENTIAL, HIGH POTENTIAL FROST ACTION, AND SLOW PERMEABILITY. THE SOIL HAS SOME SEVERE LIMITATIONS FOR BUILDING SITES. THE SITES NEED TO BE ARTIFICIALLY DRAINED TO PREVENT WEISS FROM BECOMING A PROBLEM. DWELLINGS AND SMALL BUILDINGS WITH BASEMENTS SHOULD NOT BE CONSTRUCTED ON THIS SOIL. USING PROPERLY DRAINED FOUNDATIONS AND FOOTINGS HELPS TO PREVENT STRUCTURAL DAMAGE FROM LOW STRENGTH AND SHRINKING AND SWELLING OF THE SOIL. THIS SOIL HAS SEVERE LIMITATIONS FOR LOCAL ROADS AND STREETS. THE BASE MATERIAL FOR ROADS NEEDS TO BE STRENGTHENED OR REPLACED WITH SUITABLE MATERIAL.
- MnC3 MIAMI CLAY LOAM
6 TO 12 PERCENT SLOPES, SEVERELY ERODED. THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT THE ENGINEERING USES OF THIS SOIL ARE A MODERATE SHRINK-SWELL POTENTIAL, MODERATE POTENTIAL FROST ACTION, AND SLOW PERMEABILITY. THIS SOIL HAS MODERATE LIMITATIONS FOR LOCAL ROADS AND STREETS. THE BASE MATERIAL FOR ROADS NEEDS TO BE STRENGTHENED OR REPLACED WITH SUITABLE MATERIAL.

WHEAT OR RYE

OATS

ANNUAL RYEGRASS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WHEAT OR RYE												
OATS												
ANNUAL RYEGRASS												

TEMPORARY SEEDING DATES:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NATIVE SEED												
NON-IRRIGATED*												
IRRIGATED												
DORMAT SEEDING**												

IRRIGATION NEEDED DURING THIS PERIOD, TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREAS, USE MULCH

- * LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED.
- ** INCREASE SEEDING APPLICATION BY 50%

PERMANENT SEEDING DATES

SEEDING DATES

KIND OF SEED	1000 SQ.FT.	ACRE	REMARKS
WHEAT OR RYE	3.5 LBS.	2 BU.	COVER SEED 1" TO 1-1/2" DEEP
SPRING OATS	2.3 LBS.	3 BU.	COVER SEED TO 1" DEEP
ANNUAL RYEGRASS	1 LB.	40 LBS.	COVER SEED TO 1/4" DEEP

* NOT NECESSARY WHERE MULCH IS APPLIED.

TEMPORARY SEED MIXTURES

SPECIES	SEEDING RATE LBS/ACRE	LBS/1000 SQ. FT.	SUITABLE PH	SITE SUITABILITY		
				DROUGHTY	WELL DRAINED	WET
LEVEL AND SLOPING. OPEN AREAS						
1. TALL FESCUE	35	.8	5.5-8.3	2	1	2
2. TALL FESCUE	25	.6	5.5-8.3		1	
3. RED CLOVER**	5	.12				
3. KENTUCKY BLUEGRASS	15	.4	5.5-7.5	2	1	
3. CREEPING RED FESCUE	15					
STEEP BANKS AND CUTS						
4. TALL FESCUE	15	.4	5.8-7.5	2	1	2
5. KENTUCKY BLUEGRASS	25	.6				
5. TALL FESCUE	35	.8	5.5-8.3	2	1	
5. EMERALD CROWNWETCH	10	.25				
LAWNS AND HIGH MAINTENANCE AREAS						
6. KENTUCKY BLUEGRASS	40	.9	5.8-7.5	2	1	
6. CREEPING RED FESCUE	40	.9				
7. PERENNIAL RYEGRASS (TURF TYPE)	170	4.0	5.0-7.5		1	
8. TALL FESCUE	170	4.0	5.5-8.3	2	1	2

1 - PREFERRED 2 - WILL TOLERATE

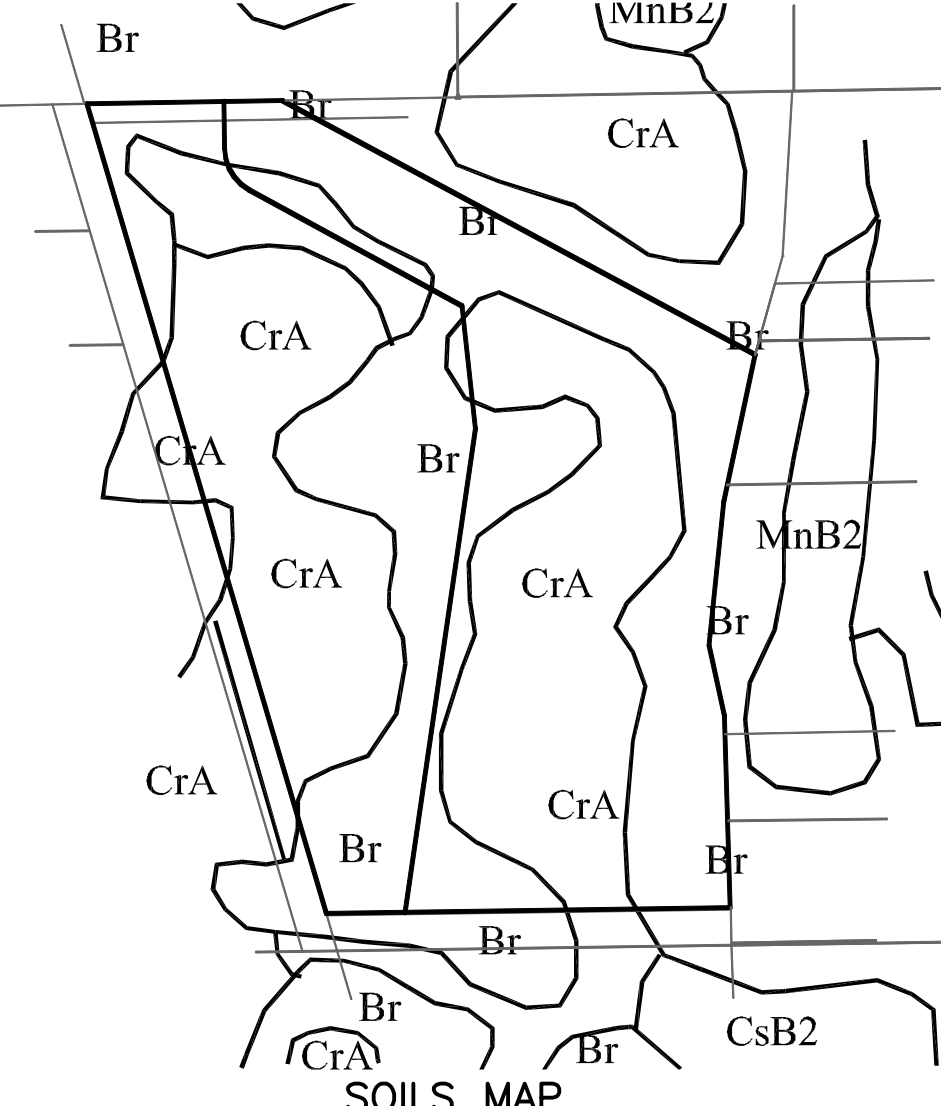
PERMANENT SEED MIXTURES

APPLY LIME TO RAISE THE PH TO THE LEVEL NEEDED FOR SPECIES BEING SEEDDED. APPLY 23 POUNDS OF 12-12-12 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1000 SQ. FT. (APPROXIMATELY 100 LBS. PER ACRE). OR FERTILIZER, ACCORDING TO TEST, APPLICATION OF 150 LBS. OF AMMONIUM NITRATE ON AREAS LOW IN ORGANIC MATTER AND FERTILITY WILL GREATLY ENHANCE VEGETATIVE GROWTH.

WORK THE FERTILIZER AND LIME INTO THE SOIL TO A DEPTH OF 2-3 INCHES WITH A HARROW, DISK OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

SELECT A SEEDING MIXTURE BASED ON PROJECTED USE OF THE AREA, WHILE CONSIDERING BEST SEEDING DATES.

SEEDING PREPARATION



EROSION CONTROL REQUIREMENTS
FOR COMPLIANCE WITH IDEM GENERAL PERMIT RULES FOR
STORM WATER RUNOFF FROM CONSTRUCTION SITES

1. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL DATED OCTOBER 2007 BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM).
2. THE EROSION CONTROL MEASURES INCLUDED IN THIS PLAN SHALL BE INSTALLED PRIOR TO INITIAL LAND DISTURBANCE ACTIVITIES OR AS SOON AS PRACTICAL. SEDIMENT SHALL BE PREVENTED FROM DISCHARGING FROM THE PROJECT SITE BY INSTALLING AND MAINTAINING SILT FENCE, STRAW BALES, SEDIMENT BASINS, ETC. AS SHOWN HEREON THIS PLAN. IF SHOWN ON THIS PLAN, EROSION-CONTROL DEVICES OR EROSION CONTROL AT THE OUTFALL OF THE STORM SEWER SYSTEM SHALL BE INSTALLED AT THE TIME OF THE CONSTRUCTION OF THE OUTFALL. THE PROPOSED DETENTION BASIN SHALL BE UTILIZED AS A SEDIMENT BASIN DURING CONSTRUCTION FOR AS LONG AS PRACTICAL.
3. ALL ON-SITE STORM DRAIN INLETS SHALL BE PROTECTED AGAINST SEDIMENTATION WITH FILTER FABRIC, OR EQUIVALENT BARRIERS AS SHOWN ON THIS PLAN.
4. EXCEPT AS PREVENTED BY INCLEMENT WEATHER CONDITIONS OR OTHER CIRCUMSTANCES BEYOND THE CONTROL OF THE CONTRACTOR / DEVELOPER APPROPRIATE EROSION CONTROL PRACTICES WILL BE INITIATED WITHIN (7) SEVEN DAYS OF THE LAST LAND DISTURBING ACTIVITY AT THE SITE. THE SITE SHALL BE STABILIZED BY SEEDING, SOODING, MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES.
5. THIS EROSION CONTROL PLAN SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE CONSTRUCTION SITE. ALL MEASURES INVOLVING EROSION CONTROL PRACTICES SHALL BE INSTALLED UNDER THE GUIDANCE OF A QUALIFIED PERSONNEL EXPERIENCED IN EROSION CONTROL AND FOLLOWING THE PLANS AND SPECIFICATIONS INCLUDED HEREIN.
6. DURING THE PERIOD OF CONSTRUCTION ACTIVITY, ALL SEDIMENT BASINS AND OTHER EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE TRANSFER OF REQUIRED MAINTENANCE RESPONSIBILITIES WITH THE OWNER.
7. PUBLIC OR PRIVATE ROADWAYS SHALL BE KEPT CLEARED OF ACCUMULATED SEDIMENT. BULK CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE POINT OF LIKELY ORIGIN OR OTHER SUITABLE LOCATION.
8. THE CONTRACTOR SHALL CONTROL WASTES, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE IN SUCH A WAY THAT THEY SHALL NOT BE TRANSPORTED FROM THE SITE BY THE ACTION OF WINDS, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL, OR MANAGEMENT OF ALL WASTES AND UNUSED BUILDING MATERIALS APPROPRIATE TO THE NATURE OF THE WASTE OR MATERIAL IS REQUIRED.

EROSION CONTROL CONSTRUCTION SEQUENCE SCHEDULING

CONSTRUCTION PHASE (SPECIFIC ACTIVITIES OR EROSION CONTROL PRACTICES)	CONSTRUCTION SCHEDULE CONSIDERATIONS	MONITORING AND MAINTENANCE SCHEDULE	CONSTRUCTION START DATE (APPROX. DATE)
PRE-CONSTRUCTION ACTIONS (EVALUATION/PROTECTION OF IMPORTANT SITE CHARACTERISTICS)	PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, CONTRACTOR TO HAVE PRE-CONSTRUCTION MEETING WITH CITY OFFICIALS (IF REQUIRED) BEFORE CONSTRUCTION. EVALUATE, MARK, AND PROTECT IMPORTANT TREES AND ASSOCIATED ROOTING ZONES. (PAVED AREAS (SILTS AND WEALAND) TO BE PRESEVED. ON-SITE SEPTIC SYSTEM ABSORPTION FIELDS, AND VEGETATION SUITABLE FOR FILTER STRIPS, ESPECIALLY IN FERTILE AREAS	ESTABLISH AND EVALUATE PROJECT ASSIGN SUPERINTENDENT WHOM WILL BE IN CHARGE OF OVERSEEING EROSION ACTIVITIES	WEEK OF (LASTING APPROX. 1 WEEK)
CONSTRUCTION ACCESS (CONSTRUCTION ENTRANCES, CONSTRUCTION ROUTES, EQUIPMENT PARKING AREAS)	STABILIZE BARE AREAS IMMEDIATELY WITH GRAVEL AND TEMPORARY VEGETATION PRIOR TO COMMENCING WORK.	INSPECT CONSTRUCTION ENTRANCE WEEKLY AND AFTER EACH 1/2" RAIN EVENT AND HEAVY USAGE. RESHAPE AND TOP DRESS AS NEEDED INCLUDING REMOVAL OF INWETTED SEDIMENTS BY SWEEPING OR BRUSHING. IF FLUSHING PROVIDE ADEQUATE SEDIMENT TRAPS FOR WATER CONVEYANCE.	WEEK OF (LASTING APPROX. 1 WEEK)
SEDIMENT BARRIERS AND TRAPS (SEDIMENT BASINS, SILT FENCES, OUTLET PROTECTION)	INSTALL PRINCIPAL BARRIERS AFTER CONSTRUCTION SITE IS ASSESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING. CONDUCT DETENTION DURING AFTER CONSTRUCTION. INSTALL PERMETER SIMILES.	INSPECT THE FABRIC BARRIER WEEKLY AND AFTER EACH 1/2" RAIN EVENT, AND MAKE NEEDED REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE POOL AREA TO PROVIDE STORAGE FOR THE NEXT STORM. AVOID DAMAGING OR UNDERCUTTING THE FABRIC DURING SEDIMENT REMOVAL. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL AND SEDIMENT. GRADE THE AREA TO THE ELEVATION OF THE TOP OF THE INLET, THEN	WEEK OF (LASTING APPROX. 1 WEEK)
RUNOFF CONTROL (DIMENSIONS, PERMETER DIKES, WATER BARS, OUTLET PROTECTION)	INSTALL PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS ARE INSTALLED BUT BEFORE SITE GRADING. INSTALL ADDITIONAL RUNOFF CONTROL MEASURES DURING GRADING AS NEEDED.	INSPECT THE SEDIMENT BASIN WEEKLY AND AFTER EACH 1/2" RAIN EVENT. REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN VOLUME (LEAK MARKED BY A REFERENCE STAKE). PERIODICALLY CHECK THE EMBANKMENT, EMERGENCY SPILLWAY, AND OUTLET FOR EROSION DAMAGE. PILING, SETTLING, SEPARATE, OR SLUMPING ALONG THE TOE OR AROUND THE BARREL AND REPAIR IMMEDIATELY. REMOVE TRASH AND OTHER DEBRIS FROM THE RISER. EMERGENCY SPILLWAY AND POOL AREA. CLEAN OR REPLACE THE DRAINAGE AROUND THE RISER IF THE SEDIMENT POOL DOES NOT DRAIN PROPERLY. REMOVE THE BASIN AFTER THE DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, INSPECTED, AND APPROVED. DO SO BY DRAINING ANY WATER REMAINING THE SEDIMENT TO A DESIGNATED DISPOSAL AREA, SMOOTHING THE SITE TO BLEND WITH THE SURROUNDING AREA, THEN STABILIZE.	WEEK OF (LASTING APPROX. 1 WEEK)
RUNOFF CONVEYANCE SYSTEMS (STABILIZED STREAMS, STORM SEWER DRAINS, INLET AND OUTLET PROTECTION, STORM OPEN CHANNELS)	WHERE NECESSARY, STABILIZE STREAMBANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL CONVEYANCE SYSTEM WITH PROTECTION OF EROSION CONTROL MEASURES. INSTALL REMANER OF SYSTEM AFTER GRADING.	PLACEMENT STORM SEWER DRAINS, INLETS AND PIPES TO BE IMMEDIATELY FOLLOWED BY INLET PROTECTION MEASURES AND TEMPORARY SEDIMENT TRAPS. OPEN CHANNEL DRAINAGE SIMILES TO BE IMMEDIATELY FOLLOWED BY PROTECTION OF EROSION CONTROL MEASURES. INSPECT TEMPORARY SEDIMENT TRAPS WEEKLY AND AFTER EACH STORM EVENT, AND IMMEDIATELY REPAIR ANY EROSION AND PILING HOLES. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH. REPLACE SPILLWAY GRAVEL FACING IF CLOGGED. INSPECT VEGETATION, AND RE-SEED IF NECESSARY. CHECK THE SPILLWAY DEPTH PERIODICALLY TO ENSURE A MINIMUM OF 1.1/2-4 FT. DEPTH FROM THE LOWEST POINT OF SETTLED DRAINAGE TO HIGHEST POINT OF SPILLWAY. PILE CRUSH, AND FILL ANY LOW AREAS TO MAINTAIN DESIGN ELEVATION.	WEEK OF (LASTING APPROX. 4 WEEK)
LAND CLEARING AND GRADING (CUTTING/FILLING, GRADING DRAINS, SEDIMENT TRAPS, BARRIERS, DIMENSIONS, SURFACE ROUGHENING)	BEGIN MAJOR CLEARING AND GRADING AFTER INSTALLING THE KEY SEDIMENT AND RUNOFF MEASURES. CLEAR BORROW AND DISPOSAL AREAS AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.	INSPECT NEWLY TOPSOILED AREAS WEEKLY UNTIL VEGETATION IS ESTABLISHED. REPAIR ERODED OR DAMAGED AREAS AND REVEGETATE.	WEEK OF (LASTING APPROX. 4 WEEK)
SURFACE STABILIZATION (TEMPORARY AND PERMANENT SEEDING, MULCHING, SOODING, RP-BAY)	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AFTER EROSION CONTROL MEASURES ARE COMPLETED.	INSPECT WEEKLY AND ESPECIALLY AFTER EACH 1/2" RAIN EVENT, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED. CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE: MODERATE DENSE GRASS OR BUSHES. SEEDINGS, UNIFORM DENSITY WITH NURSE PLANTS, LEGUMES, AND GRASSES WELL INTER-MIXED. GREEN LEAVES AND THE PERENNIALS REMAINING GREEN THROUGHOUT THE SUMMER, AT LEAST AT THE PLANT BASE. PLAN TO ADD FERTILIZER THE FOLLOWING GROWING SEASON ACCORDING TO SOIL TEST RECOMMENDATIONS. REPAIR DAMAGED, BARE, OR SPARSE AREAS BY FILLING ANY GULLIES, RE-FERTILIZING, OVER-OR RE-SEEDING, AND MULCHING. IF PLANT COVER IS SPARSE OR PATCHY, REVIEW THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCHING; THEN REPAIR THE AFFECTED AREA EITHER BY OVER-SEEDING OR BY RE-SEEDING AND MULCHING AFTER RE- PREPARING THE SEEDBED. IF VEGETATION FAILS TO GROW, CONSIDER SOIL TESTING TO DETERMINE ACIDITY OR NUTRIENT DEFICIENCY PROBLEMS. IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS. INSPECT AFTER STORM EVENTS TO CHECK FOR MOVEMENT OF MULCH OR FOR EROSION. IF WASHOUT, BROWAGE, OR EROSION IS PRESENT, REPAIR THE SURFACE, THEN RE-SEED, RE-MULCH AND, IF APPLICABLE, INSTALL NEW NETTING. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED. INSPECT PERIODICALLY FOR DISPLACED ROCK MATERIAL, SLUMPING, AND EROSION AT EDGE, ESPECIALLY DOWNHILL OR DOWN SLOPE. PROPERLY DESIGNED AND INSTALLED RIPRAP USUALLY REQUIRES VERY LITTLE MAINTENANCE IF PROMPTLY REPAIRED.	WEEK OF (LASTING APPROX. 2 WEEK)
UTILITY / PAVEMENT CONSTRUCTION (UTILITIES, PAVING)	INSTALL NECESSARY EROSION AND SEDIMENT CONTROL PRACTICES AS WORK TAKES PLACE.	DURING VEGETATIVE ESTABLISHMENT, INSPECT WEEKLY AND AFTER EACH 1/2" RAIN EVENT FOR ANY EROSION BELOW THE BLANKET. IF ANY AREA SHOWS EROSION, PULLBACK THAT PORTION OF THE BLANKET COVERING IT AND SOIL, RE-SEED THE AREA, AND RE- LAY AND STAPLE THE BLANKET. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA.	WEEK OF (LASTING APPROX. 6 WEEK)
BUILDING CONSTRUCTION	INSTALL NECESSARY EROSION AND SEDIMENT CONTROL PRACTICES AS WORK TAKES PLACE.	DURING VEGETATIVE ESTABLISHMENT, INSPECT WEEKLY AND AFTER EACH 1/2" RAIN EVENT FOR ANY EROSION BELOW THE BLANKET. IF ANY AREA SHOWS EROSION, PULLBACK THAT PORTION OF THE BLANKET COVERING IT AND SOIL, RE-SEED THE AREA, AND RE-SEEDING. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA.	WEEK OF (LASTING APPROX. 3 YEARS)
LANDSCAPING AND FINAL STABILIZATION (TOPSOIL, TREES, AND SHRUBS, PERMANENT SEEDING, MULCHING, SOODING, RP-BAY)	STABILIZE ALL OPEN AREAS INCLUDING BORROW AND SPILL AREAS. REPAIR TEMPORARY CONTROL MEASURES. CLEAR BORROW AND DISPOSAL AREAS AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.	INSPECT WEEKLY AND AFTER EACH 1/2" RAIN EVENT, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED. REPAIR DAMAGED, BARE, OR SPARSE AREAS BY FILLING ANY GULLIES, RE-FERTILIZING, OVER-OR RE-SEEDING, AND MULCHING. IF PLANT COVER IS SPARSE OR PATCHY, REVIEW THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCHING; THEN REPAIR THE AFFECTED AREA EITHER BY OVER-SEEDING OR BY RE-SEEDING AND MULCHING AFTER RE- PREPARING THE SEEDBED. IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.	WEEK OF (LASTING APPROX. 2 WEEK)

MAINTENANCE-- INSPECT PRACTICES ONCE A WEEK, & AFTER EACH 1/2" RAIN EVENT.

DATE	REVISION	SYMBOL	SCALE	NONE	DRAWN	CHECKED	CERTIFIED
					JPH	JKS	JKS
PROJECT				LAUGLE BUILDING #2 AT PATRIOT DEFENSE RESEARCH PARK LOT #2 CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA			
TITLE				STORM WATER POLLUTION PREVENTION PLAN DETAILS			
COMPANY				GREENWOOD SURVEYING COMPANY			
SEAL				JEFFERY K. SMITH REGISTERED No. 19419 STATE OF INDIANA PROFESSIONAL ENGINEER			
JOB NUMBER				21008.01			
SHEET				C801			
DATE				MAY 3, 2023			

