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4	SITE PLAN & DEMOLITION PLAN
5	GRADING PLAN
6	STORM SEWER PLAN & PROFILE
7	SANITARY SEWER PLAN & PROFILE
8	STORM SEWER & SANITARY SEWER DETAILS
9	WATER MAIN PLAN & PROFILE
10	WATER MAIN DETAILS
11	EROSION CONTROL & SEEDING PLAN
12	EROSION CONTROL PLAN INDEX

EROSION CONTROL DETAILS

GATEWAY DR. LONGEST DRIVE E. KING ST. (S.R. 44)

FRANKLIN GATEWAY DEVELOPMENT - SECTION 4 CONSTRUCTION PLANS

SUBJECT LAND OWNERS

J ENTERPRISES INN OF GRANVILLE DRIVE, LLC INST. #2018-027043
AUDITOR'S MAP #41-07-18-042-005.000-018

FRANKLIN GATEWAY DEVELOPMENT LLC
INST. #2018-022664
AUDITOR'S MAP #41-07-18-042-004.000-018

J ENTERPRISES INN OF GRANVILLE DRIVE, LLC INST. #2023-____

AUDITOR'S MAP #41-07-18-031-003.000-018

ADJOINING LAND OWNERS

S & L PROPERTIES FRANKLIN LLC

INST. #2020-010366 AUDITOR'S MAP #41-07-18-042-008.000-018

5 INST. #2019-012353
AUDITOR'S MAP #41-07-18-042-007.000-018
FRANKLIN RETAIL, LLC.

INST. #2007-026816

INST. #2019-012353
AUDITOR'S MAP #41-07-18-042-006.000-018
SHIV27, LLC.

AUDITÖR'S MAP #41-07-18-031-006.003-018

MCDONALD'S CORPORATION

D.R. 241. PG. 412

AUDITOR'S MAP #41-07-18-031-006.001-018

SHIV REAL ESTATE 47 LLC

(9) INST. #2022-007570 AUDITOR'S MAP #41-07-18-031-006.000-018 FRANKLIN HOTEL ASSOCIATES, LLC.

10 INST. #2018-009330
AUDITOR'S MAP #41-07-18-031-008.000-018

FAIRWAY LAKES DEVELOPMENT

DIETRICH S. PAHL & J. MICHELLE PAHL
INST. #2013-011763
FAIRWAY LAKES SEC. II LOT 47

FAIRWAY LAKES SEC. 1 COMMON AREA #1
AUDITOR'S MAP #41-07-18-031-016.000-018

AUDITOR'S MAP #41-07-18-024-038.000-018

MARK DOMINICK HENSLEY & JESSICA HENSLEY
INST. #2013-023281

FAIRWÂY LAKES SEC. II LOT 46
AUDITOR'S MAP #41-07-18-024-037.000-018

JOSEPH M. PFENNIG & MARCIA DIANNE PFENNIG

INST. #2018-013975
W. 1/2 LOT 178 - PARIS ESTATES SEC. 6
AUDITOR'S MAP #41-07-18-024-001.001-018
KENNETH DICKEY

INST. #2021-001271
E. 1/2 LOT 178 - PARIS ESTATES SEC. 6
AUDITOR'S MAP #41-07-18-013-001.000-018

INST. #2022-021775

W. 1/2 LOT 177 - PARIS ESTATES SEC. 6
AUDITOR'S MAP #41-07-18-013-051.000-018

JAMES H. FISHER

JAMES H. FISHER

INST. #2022-021775
E. 1/2 LOT 177 - PARIS ESTATES SEC. 6
AUDITOR'S MAP #41-07-18-013-002.000-018

BRIAN PFAEHLER

INST. #2021-016090 LOT 176 - PARIS ESTATES SEC. 6 AUDITOR'S MAP #41-07-18-013-003.000-018

MICHAEL G. WAUGH & KATHLEEN H. WAUGH
INST. #2023-006525
LOT 175 - PARIS ESTATES SEC. 6

AUDITOR'S MAP #41-07-18-013-004.000-018

J ENTERPRISES INN OF NASHVILLE, LLC.
INST. #2018-019410
AUDITOR'S MAP #41-07-18-042-011.000-018

WRITTEN DESCRIPTION OF LOCATION OF PROPERTY:
7.20 ACRES IN THE SOUTH HALF OF SECTION 18, TOWNSHIP 12 NORTH, RANGE 5 EAST IN JOHNSON COUNTY, INDIANA, BEING BLOCK "A" IN FRANKLIN GATEWAY DEVELOPMENT SECTION 3 AND UNPLATTED GROUND, LOCATED ON THE EAST SIDE OF GRANVILLE DRIVE, GATEWAY DRIVE, AND PARIS DRIVE IN FRANKLIN, INDIANA.

CURRENT ZONING:
MIXED-USE: REGIONAL CENTER (MXR)

PARCEL NUMBERS:
AUDITOR'S MAP #41-07-18-042-005.000-018
AUDITOR'S MAP #41-07-18-042-004.000-018

AUDITOR'S MAP #41-07-18-031-003.000-018

LAND DESCRIPTION:
A PART OF THE SOUTH HALF OF SECTION 18, TOWNSHIP 12 NORTH, RANGE 5 EAST, JOHNSON COUNTY, INDIANA, DESCRIBED AS

BLOCK A OF "REPLAT OF BLOCK A FRANKLIN GATEWAY DEVELOPMENT — SECTION 3" AS RECORDED IN PLAT CABINET "E", SLIDE 493a,b AS INSTRUMENT #2021—007855 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIAN, CONTAINING 6.85 ACRES, MORE OR LESS, AND SUBJECT TO ALL LEGAL RIGHTS OF WAY AND EASEMENTS.

(VERBATIM PER INSTRUMENT \$2023-___)

PART OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 18, TOWNSHIP 12 NORTH, RANGE 5 EAST, NEEDHAM TOWNSHIP,
JOHNSON COUNTY INDIANA DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE SOUTH 00 DEGREES 40 MINUTES 45 SECONDS EAST ALONG THE EAST LINE OF SAID SOUTHWEST QUARTER A DISTANCE OF 223.70 FEET TO THE PLACE OF BEGINNING; THENCE CONTINUING SOUTH 00 DEGREES 40 MINUTES 45 SECONDS EAST ALONG SAID EAST LINE A DISTANCE OF 187.73 FEET TO THE NORTHERLY BOUNDARY OF GATEWAY DRIVE PER INSTRUMENT NUMBER 2016—014323, AS RECORDED IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA; THENCE NORTH 84 DEGREES 35 MINUTES 19 SECONDS WEST ALONG SAID NORTHERLY BOUNDARY A DISTANCE OF 120.70 FEET TO THE EASTERLY BOUNDARY OF PARIS DRIVE PER SAID INSTRUMENT NUMBER 2016—014323; THENCE ALONG SAID EASTERLY BOUNDARY THE FOLLOWING THREE COURSES: 1) NORTH 07 DEGREES 27 MINUTES 18 SECONDS EAST A DISTANCE OF 52.41 FEET; 2) NORTH 31 DEGREES 16 MINUTES 01 SECOND EAST A DISTANCE OF 89.12 FEET; 3) NORTH 53 DEGREES 23 MINUTES 35 SECONDS EAST A DISTANCE OF 80.82 FEET TO THE PLACE OF BEGINNING. CONTAINING 0.346 ACRES, MORE OR LESS.

CONTAINING IN ALL, 7.20 ACRES, MORE OR LESS, AND SUBJECT TO ALL LEGAL RIGHTS OF WAY AND EASEMENTS.

FLOODPLAIN INFORMATIO

THIS SITE IS IN THE MAPPED FLOOD PLAIN (ZONE "X"-UNSHADED (OUTSIDE 500 YEAR FLOOD PLAIN)) ON THE NATIONAL FLOOD INSURANCE RATE MAP - PANEL NUMBER 18081C0232D, DATED AUGUST 2, 2007. ALL CONSTRUCTION, FILLING, GRADING OR ALTERATION OF THE MAPPED FLOOD PLAIN SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS IN THE FRANKLIN & JOHNSON COUNTY, INDIANA ZONING ORDINANCE AS PERIODICALLY AMENDED.

BENCHMARK INFORMATION:
THE HORIZONTAL COORDINATE SYSTEM IS NAD83 INDIANA EAST 1301 AND THE VERTICAL DATUM IS NAVD88 BASED ON THE INDIANA CONTINUOUSLY OPERATING REFERENCE SYSTEM (INCORS).

UTILITY INFORMATION:
THE EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ON THE DRAWING WERE OBTAINED FROM SURFACE MARKINGS BY OTHERS AND BY VISIBLE SURFACE INDICATIONS. INDEPENDENT LAND SURVEYING, INC. IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY OF THE SURFACE MARKINGS MADE BY OTHERS. THIS INFORMATION IS BELIEVED TO BE CORRECT BUT IS NOT GUARANTEED. LOCATION OF ALL UTILITIES SHOULD BE FIELD VERIFIED BEFORE ANY NEW CONSTRUCTION BEGINS. DEPTHS OF UNDERGROUND UTILITIES WERE NOT MARKED AND ARE UNKNOWN UNLESS NOTED OTHERWISE.

OWNER

J ENTERPRISES INN OF GRANVILLE, LLC
430 2ND ST.
COLUMBUS, IN 47201
PHONE: 812-379-2173
CONTACT: JANEEN SPRAGUE
EMAIL: spraguecompany@comcast.net

OWNER
FRANKLIN GATEWAY DEVELOPMENT, LLC
430 2ND ST.
COLUMBUS, IN 47201
PHONE: 812-379-2173
CONTACT: JANEEN SPRAGUE
EMAIL: spraguecompany@comcast.net

DEVELOPER
FRANKLIN GATEWAY DEVELOPMENT, LLC
430 2ND ST.
COLUMBUS, IN 47201
PHONE: 812-379-2173
CONTACT: JANEEN SPRAGUE
EMAIL: spraguecompany@comcast.net

SURVEYOR
INDEPENDENT LAND SURVEYING
414 SOUTH MAIN STREET
BROWNSTOWN, IN 47220
PHONE: 812-358-2882
CONTACT: JONATHAN M. ISAACS
EMAIL: jisaacs@ilsurveying.com

ENGINEER
INDEPENDENT LAND SURVEYING
414 SOUTH MAIN STREET
BROWNSTOWN, IN 47220
PHONE: 812-358-2882
CONTACT: JAMES C. LEINART
EMAIL: chad@ilsurveying.com



Sq _

> .

ame :Lient: Sprague companies gateway development – Sectio construction plans

414 South Main Street
Brownstown, Indiana 47220
Phone: 812–358–2882
Fax: 812–358–2605
3200 Sycamore Ct., Ste 2A
Columbus, Indiana 47203
Phone: 812–372–0996
Fax: 812–602–0484

Land Surveying

TITLE SHEET

drawn by:

BS, SS, CC

Scale:

1"=100'

Age:

11/2/23

job no.

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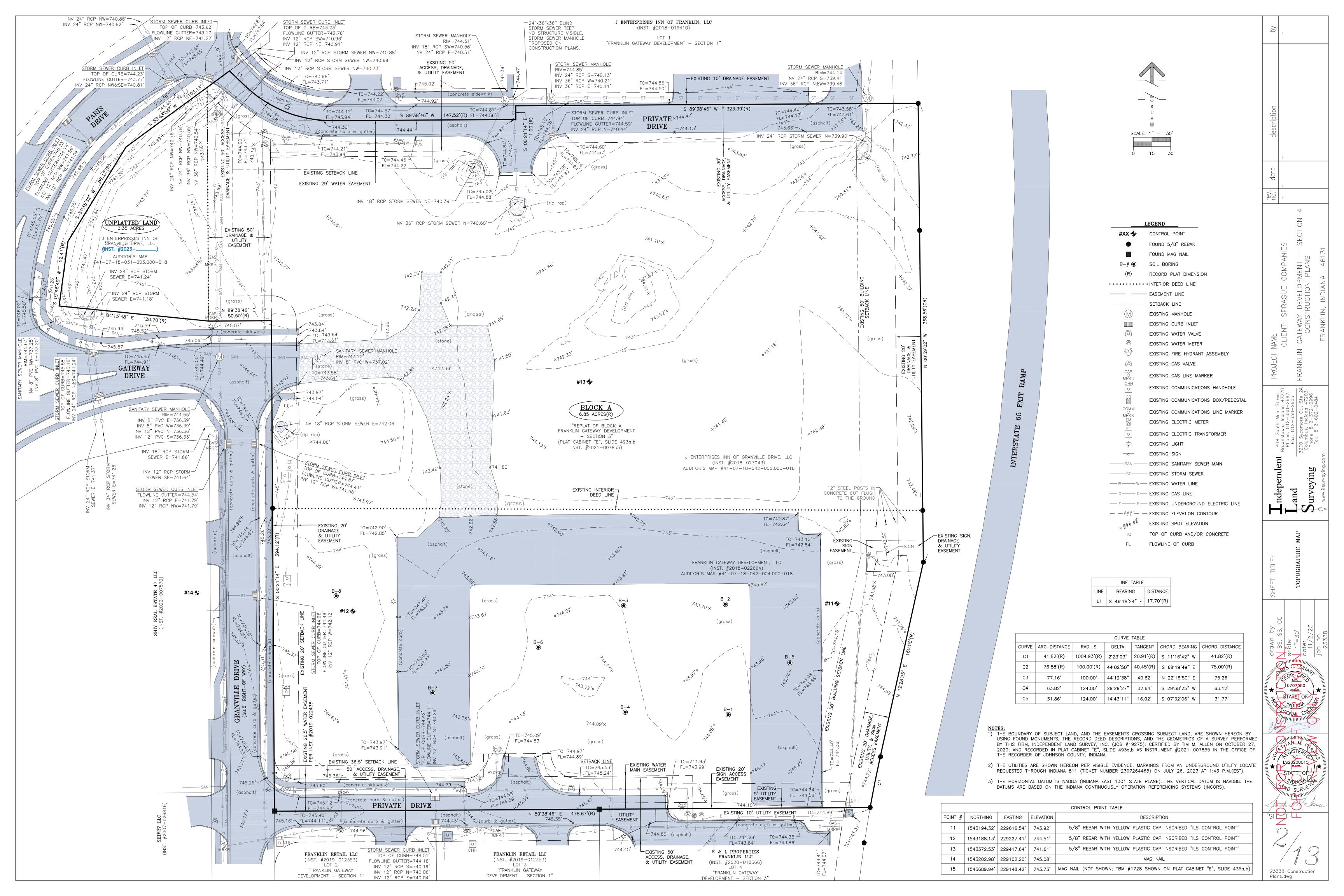
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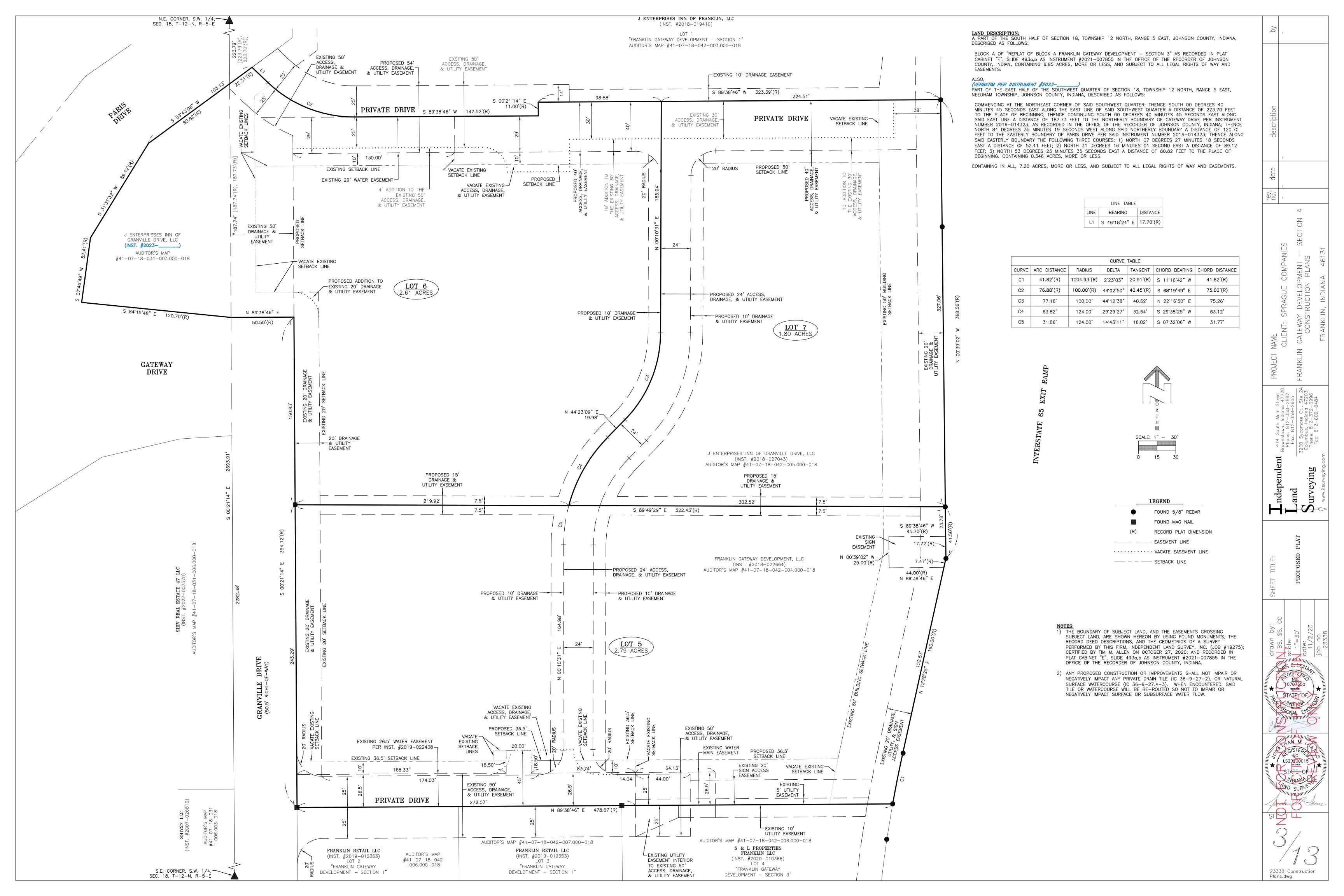
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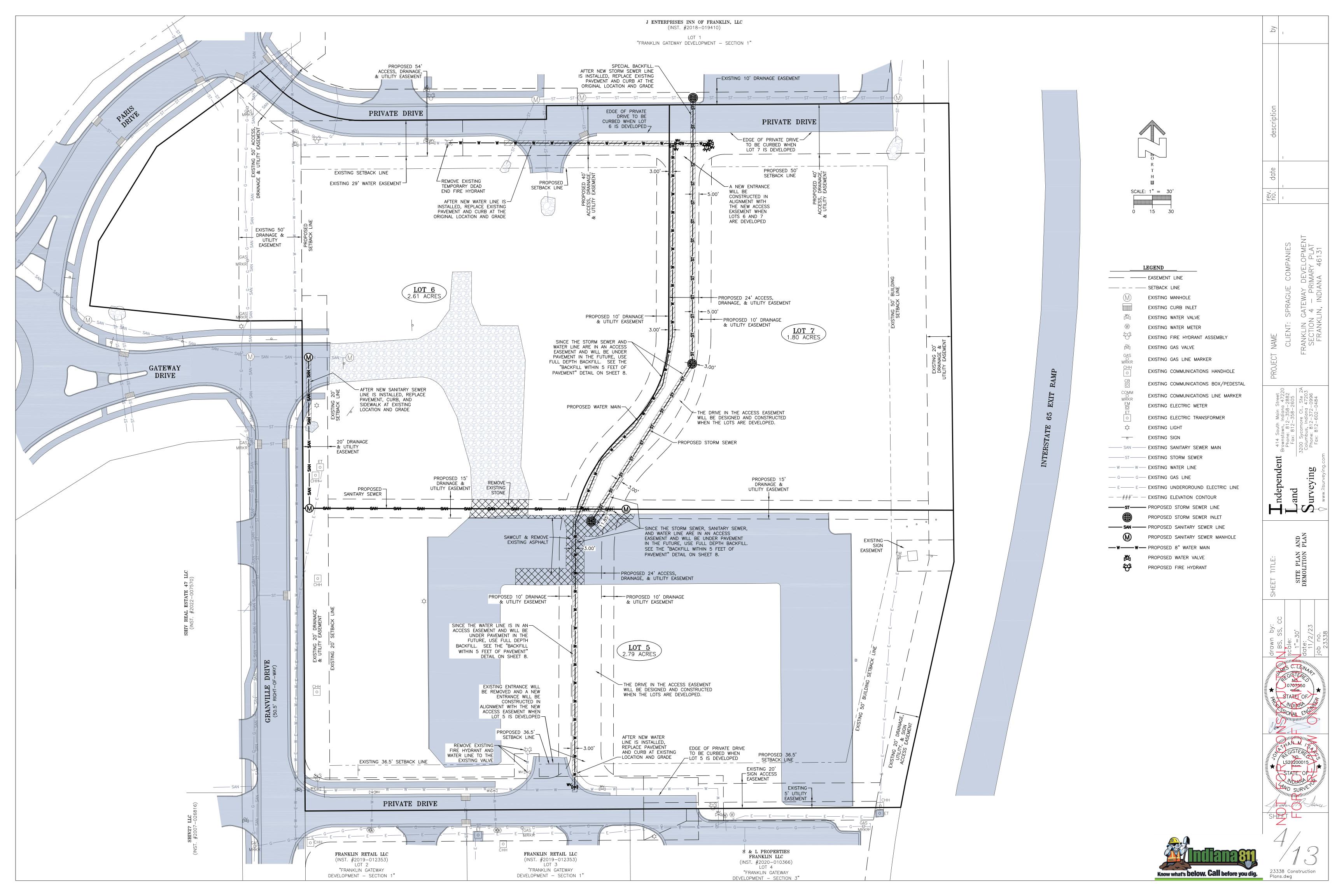
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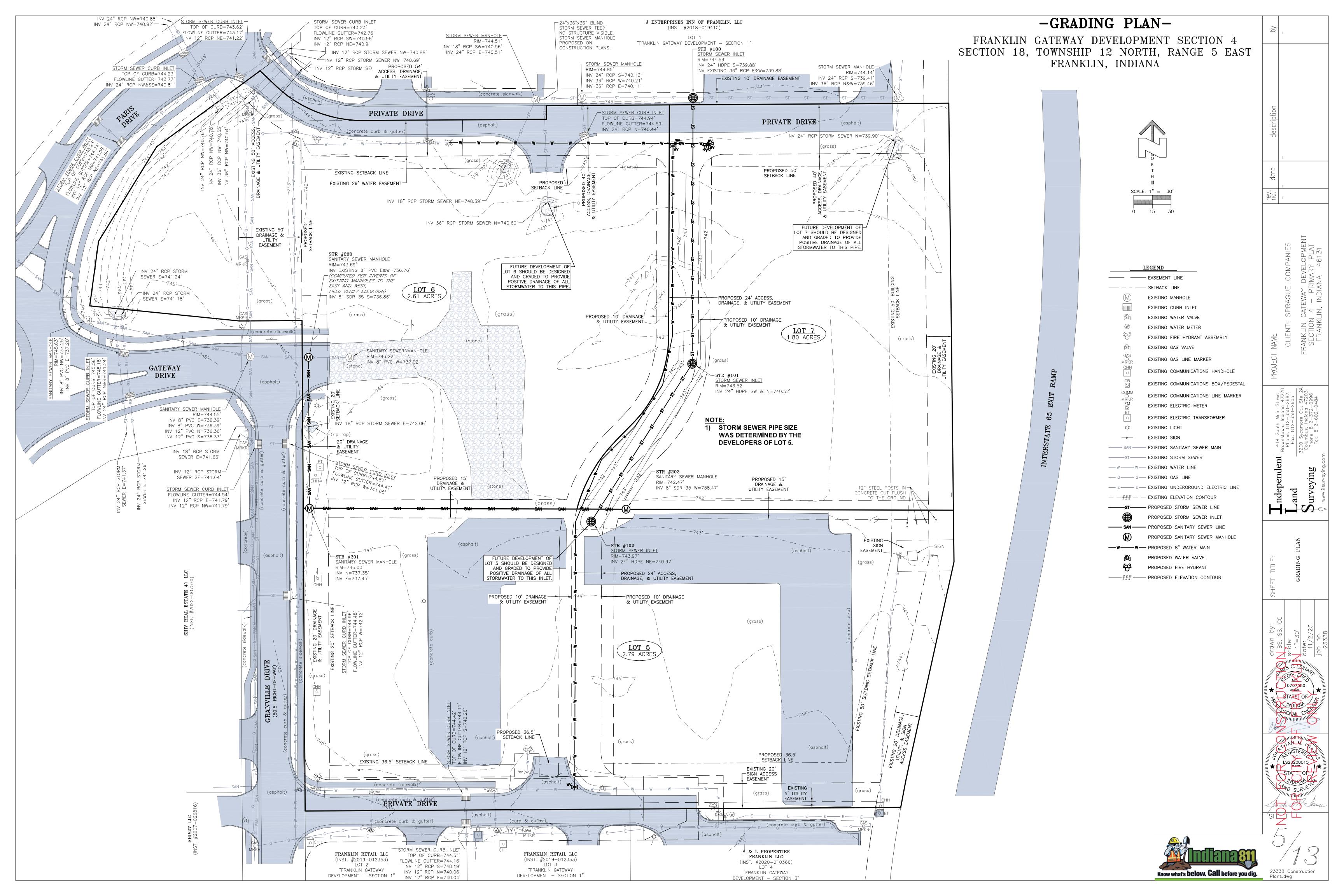
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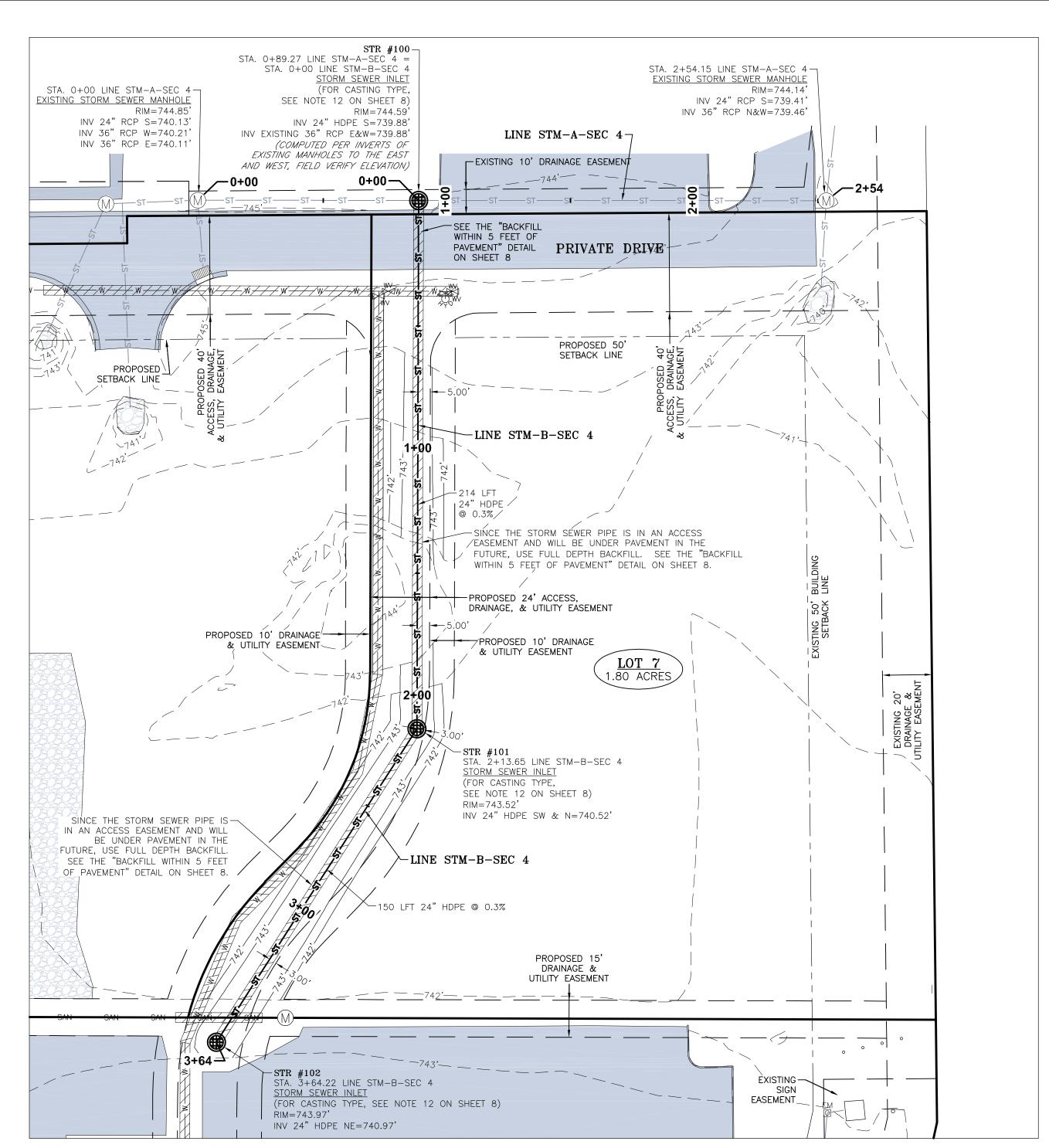
STATE OF MODIANA COMMISSION SALES SHEET 23338 Construction



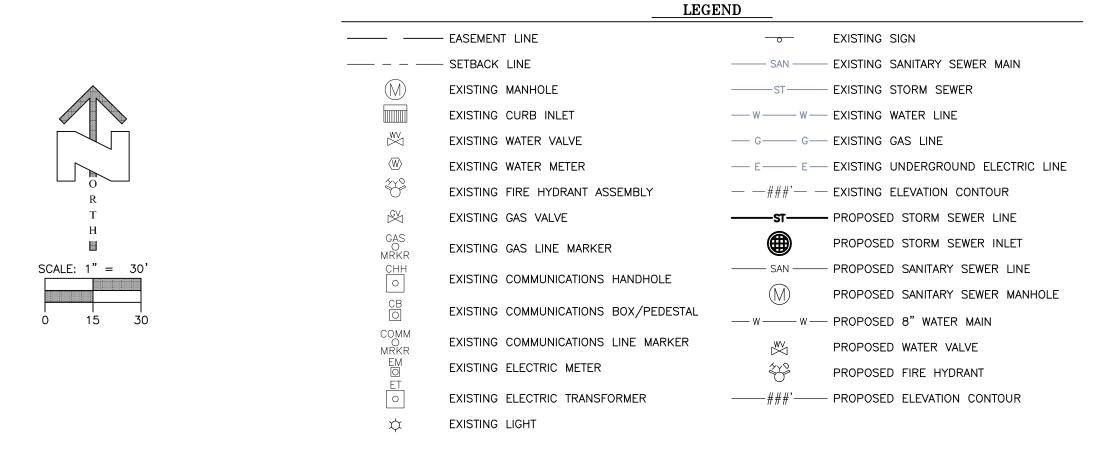


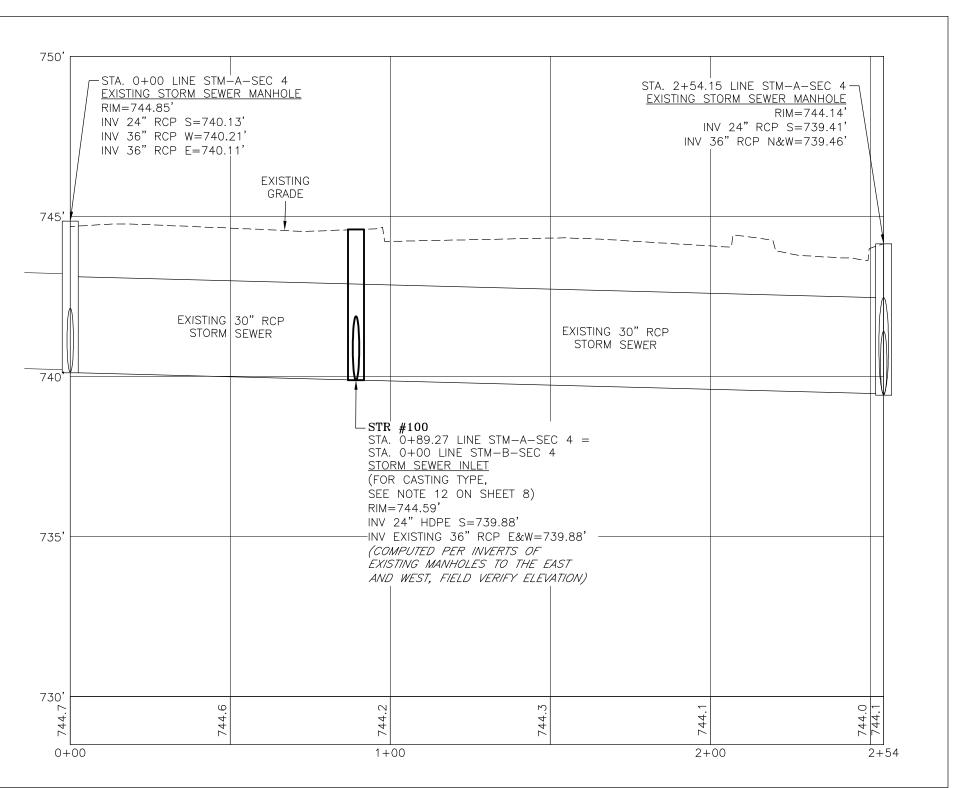






PLAN VIEW
SCALE: 1"=30"



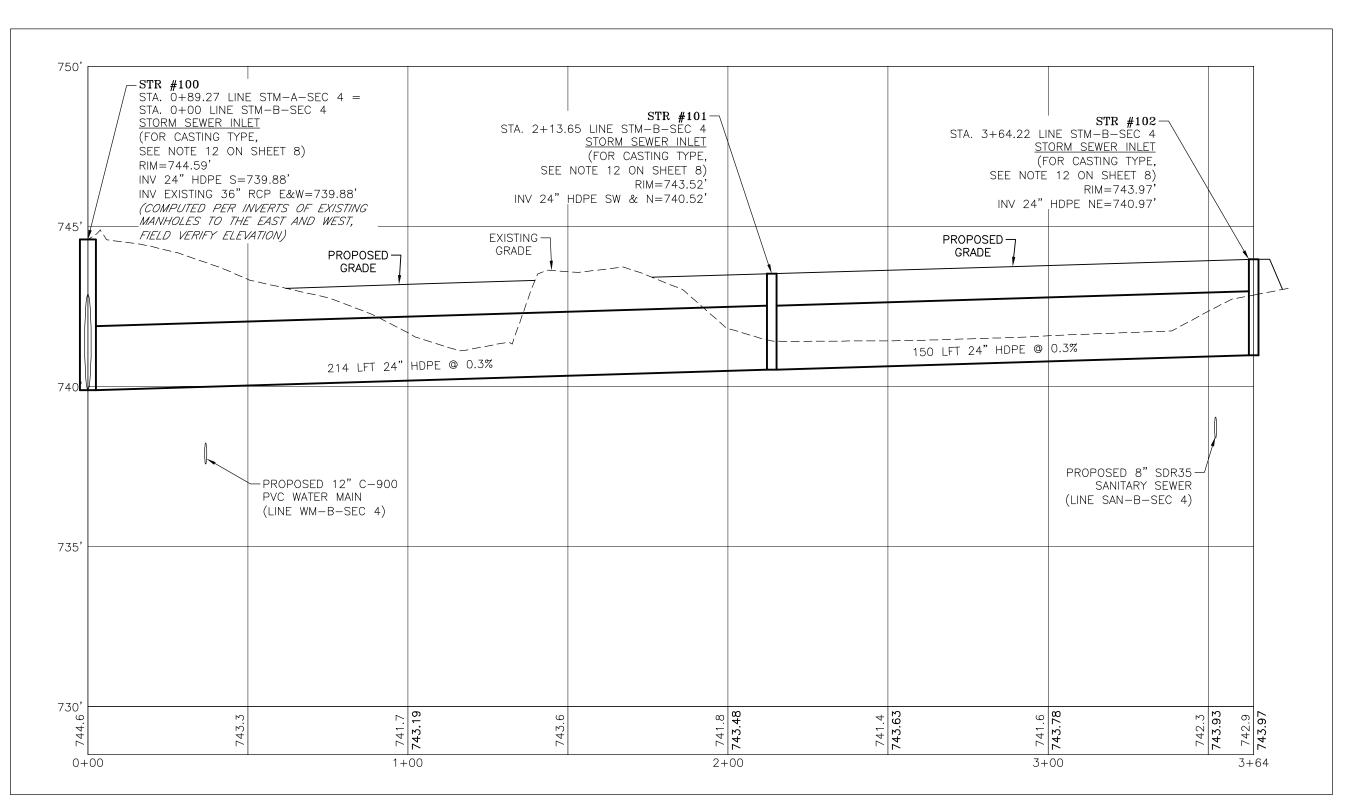


PROFILE LINE STM-A-SEC 4
HORIZONTAL SCALE: 1"=30'

VERTICAL SCALE: 1"=3"

NOTE:

1) STORM SEWER PIPE SIZE WAS DETERMINED BY THE DEVELOPERS OF LOT 5.



PROFILE LINE STM-B-SEC 4

HORIZONTAL SCALE: 1"=30'

VERTICAL SCALE: 1"=3'



des

date

no.

IT: SPRAGUE COMPANIES
IN GATEWAY DEVELOPMENT
ION 4 - PRIMARY PLAT

14 South Main Street PNUJEUI winstown, Indiana 47220 hone: 812–358–2882 Fax: 812–358–2605

5 Sycamore Ct., Ste 2A lumbus, Indiana 47203 hone: 812–372–0996 fax: 812–602–0484

ndependent Brownstown, Inc. Brownstown, Inc. Brownstown, Inc. Brownstown, Inc. Brownstown, Inc. Brownstown, Inc. Brownstown Inc. Brownstown, Inc. B

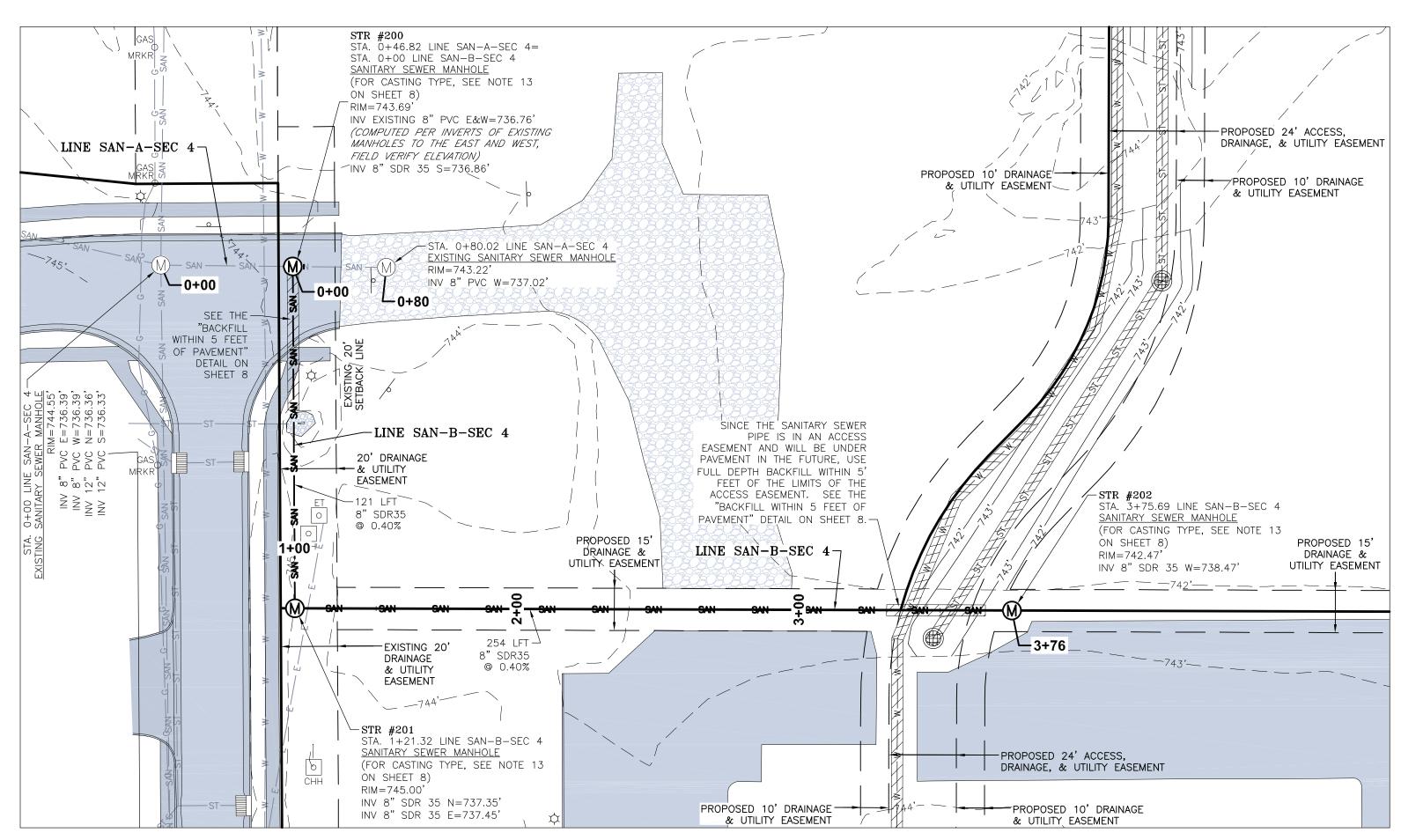
STORM SEWER PLAN AND PROFILE

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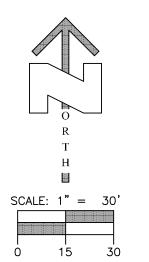
STATE OF MODIANA ON MINING MAN AND SURVE

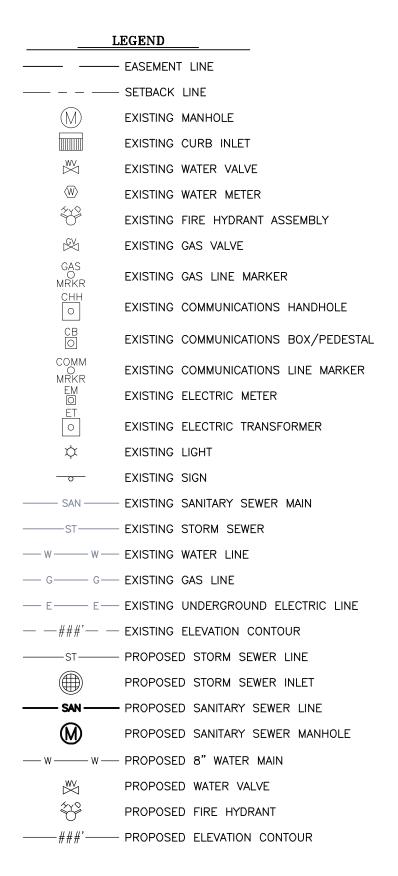
23338 Construction

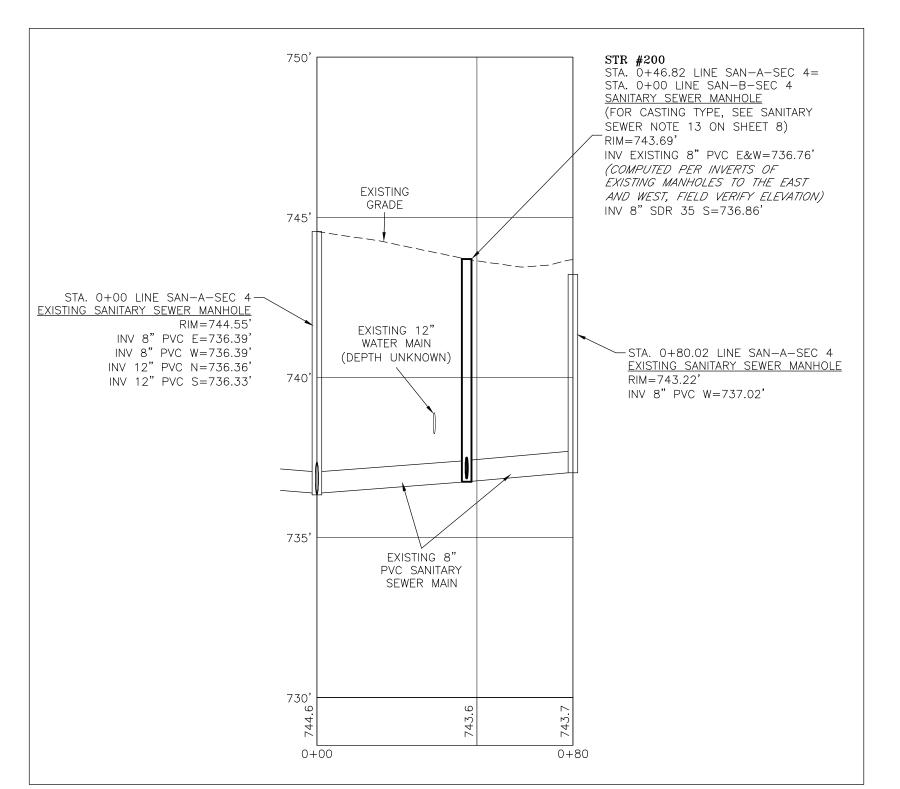
Plans.dwg



PLAN VIEW
SCALE: 1"=30'



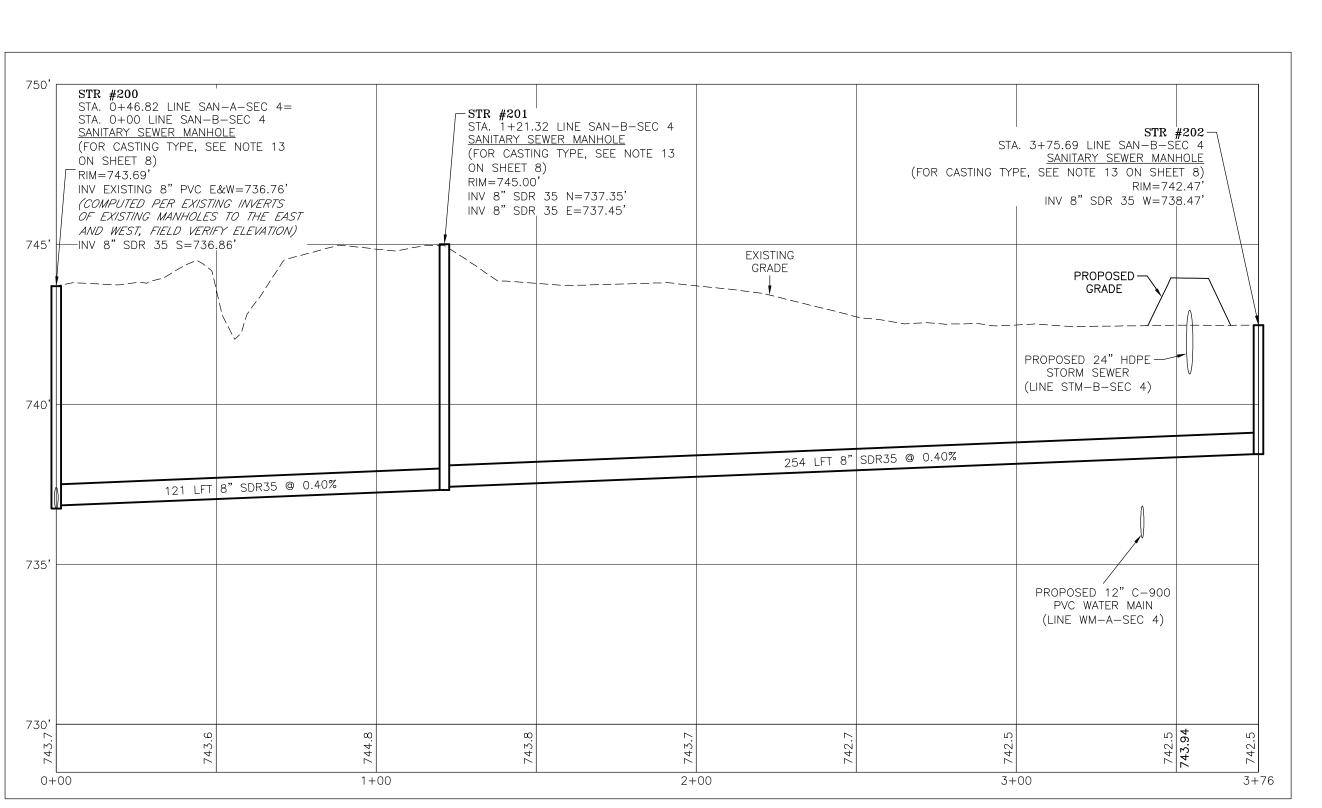




PROFILE LINE SAN-A-SEC 4

HORIZONTAL SCALE: 1"=30'

VERTICAL SCALE: 1"=3'



PROFILE LINE SAN-B-SEC 4

HORIZONTAL SCALE: 1"=30'

VERTICAL SCALE: 1"=3'



drawn by:

SHEET TITLE:

BS, SS, CC

Scale:

SANITARY SEWER

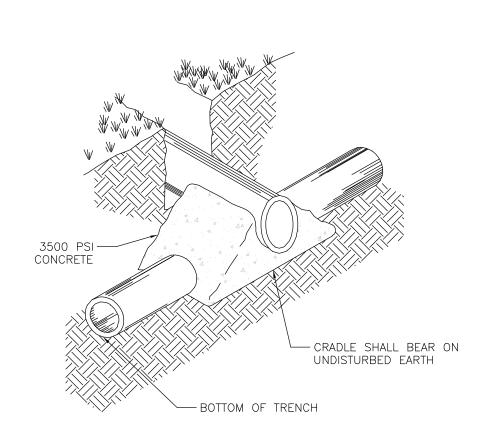
PLAN AND PROFILE

Job no.

Job no.

STORM SEWER AND SANITARY SEWER NOTES:

- 1. FOR MANHOLES AND INLETS IN EXISTING STREETS, COVERS SHALL MATCH EXISTING GRADE.
- 2. ALL SLOPES TO BE FINISHED WITHIN 1" TO TOP OF CASTING RING.
- 3. MANHOLE STEPS TO BE STANDARD PLASTIC WITH STEEL REINFORCING.
- 4. DROP MANHOLES SHALL BE PROVIDED FOR ANY SEWER ENTERING A MANHOLE AT AN ELEVATION OF 24" OR MORE ABOVE MANHOLE INVERT. DROP PIPES TO BE OF THE SAME MATERIAL AS THE SEWER MAINS.
- 5. ROOF DRAINS, FOUNDATION DRAINS, OR ANY OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE
- 6. TESTING:
- A. INFILTRATION/EXFILTRATION SHALL NOT EXCEED 100 GALLONS PER DAY PER INCH DIAMETER PER MILE OF PIPE. B. IF FLEXIBLE PIPE IS USED, INSTALLATION SHALL BE TESTED FOR DEFLECTION IN ACCORDANCE WITH AWWA C 900 SECTION
- C. MANHOLES SHALL BE AIR TESTED IN ACCORDANCE WITH ASTM C 1244-93, STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLE BY NEGATIVE AIR PRESSURE (VACUUM).
- 7. ALL WYES, LATERALS, AND STUB OUTS SHALL BE SEALED OR PLUGGED WITH AN APPROVED PLUG COMPATIBLE WITH THE TYPE
- 8. INSPECTION: PERIODIC OBSERVATION OF WORK IN PROGRESS SHALL BE PROVIDED BY A REPRESENTATIVE OF THE DEVELOPER. THE CITY OF FRANKLIN PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO STARTING WORK AND PRIOR TO RESTARTING WORK AFTER DELAYS OR SHUT-DOWNS.
- 9. SEWERS SHALL BE LAID AT LEAST TEN (10) FEET, HORIZONTALLY, FROM ANY EXISTING WATER MAINS. CROSSINGS OF BURIED SEWERS AND WATER LINES SHALL BE AVOIDED AS MUCH AS POSSIBLE. HOWEVER, WHERE CROSSINGS ARE NECESSARY, A MINIMUM OF 18 INCHES VERTICAL CLEARANCE SHALL BE MAINTAINED (MEASURED FROM THE BOTTOM OF THE UPPER PIPE TO THE TOP OF THE LOWER PIPE), PREFERABLY WITH THE WATER MAIN ABOVE THE SEWER. WHEN IT IS IMPOSSIBLE TO MAINTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION, THE SEWER SHALL BE CONSTRUCTED OF WATERWORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS OR SDR 35 PVC PRESSURE SEWER PIPE IN ACCORDANCE WITH ASTM D-3034 WITH COMPRESSION FITTINGS, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
- 10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HEREON PLANS, IN ACCORDANCE WITH ALL STATE CODES, AND THE WATER POLLUTION CONTROL TECHNICAL SPECIFICATION MANUAL OF THE CITY OF SEYMOUR, INDIANA.
- 11. INSTALL SOLID COPPER LOCATE WIRE WITH ALL SANITARY SEWER PIPES. WIRE SHALL BE A MINIMUM OF 12 GAUGE. WIRE SHALL BE TAPED TO PIPE AT A MINIMUM SPACING OF 10'. CONTINUITY SHALL BE TESTED AFTER THE COMPLETION OF BACKFILL. IF CONTINUITY IS NOT PRESENT, CONTRACTOR SHALL REPAIR OR REPLACE THE LOCATE WIRE TO THE OWNER'S SATISFACTION.
- 12. PER CITY OF FRANKLIN PUBLIC WORKS DEPARTMENT SANITARY AND STORMWATER SPECIFICATIONS, SECTION 5.06 (B)(2), INLET CASTINGS SHALL BE NEENAH TYPE R-3501-TR, OR EQUAL FOR ROLLED CURBS. INLET CASTINGS FOR VERTICAL CURB SHALL BE NEENAH TYPE R-3085-DL, OR EQUAL. INLET CASTINGS FOR ROUND CATCH BASINS SHALL BE NEENAH TYPE R-2502-B-D,
- 13. PER CITY OF FRANKLIN PUBLIC WORKS DEPARTMENT SANITARY AND STORMWATER SPECIFICATIONS, SECTION 5.05 (H), "STANDARD MANHOLES SHALL HAVE A R-1772 CVH FRAME AND LID BY NEENAH FOUNDRY, 1875-3 BY EAST JORDAN IRON WORKS, OR APPROVED EQUAL. MATERIAL SHALL BE IN COMPLIANCE WITH ASTM A 48, CL 35B. EACH LID SHALL HAVE 2 INCH HIGH LETTERS INDICATING "CITY OF FRANKLIN SANITARY SEWER". WHERE WATERTIGHT CASTINGS ARE REQUIRED, THE MANHOLES SHALL HAVE A R-1916F FRAME AND LID BY NEENAH FOUNDRY, 1045 HD BY EAST JORDAN IRON WORKS, OR APPROVED EQUAL. THE FRAME SHALL BE ANCHORED TO THROUGH THE RISER RINGS (IF PROVIDED) TO THE CONE SECTION WITH FOUR (4) GALVANIZED RODS."
- 14. FOR MORE SPECIFICATIONS REGARDING STORM SEWERS AND SANITARY SEWERS, SEE THE CITY OF FRANKLIN PUBLIC WORKS DEPARTMENT SANITARY AND STORMWATER SPECIFICATIONS FOUND AT: https://www.franklin.in.gov/department/index.php?structureid=25



RECOMMENDED MINIMUM

TRENCH WIDTHS

MIN. TRENCH WIDTI

21"

23"

26"

28"

30"

34"

39"

48"

56"

64"

72"

80"

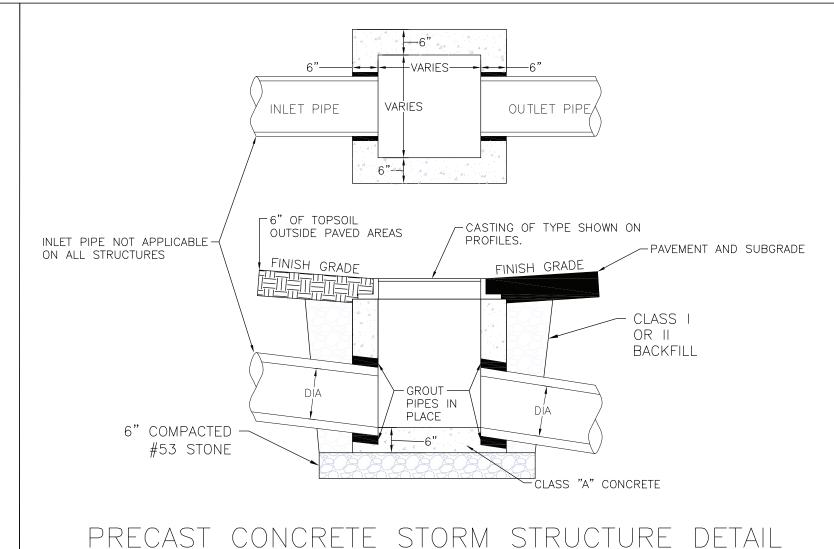
96"

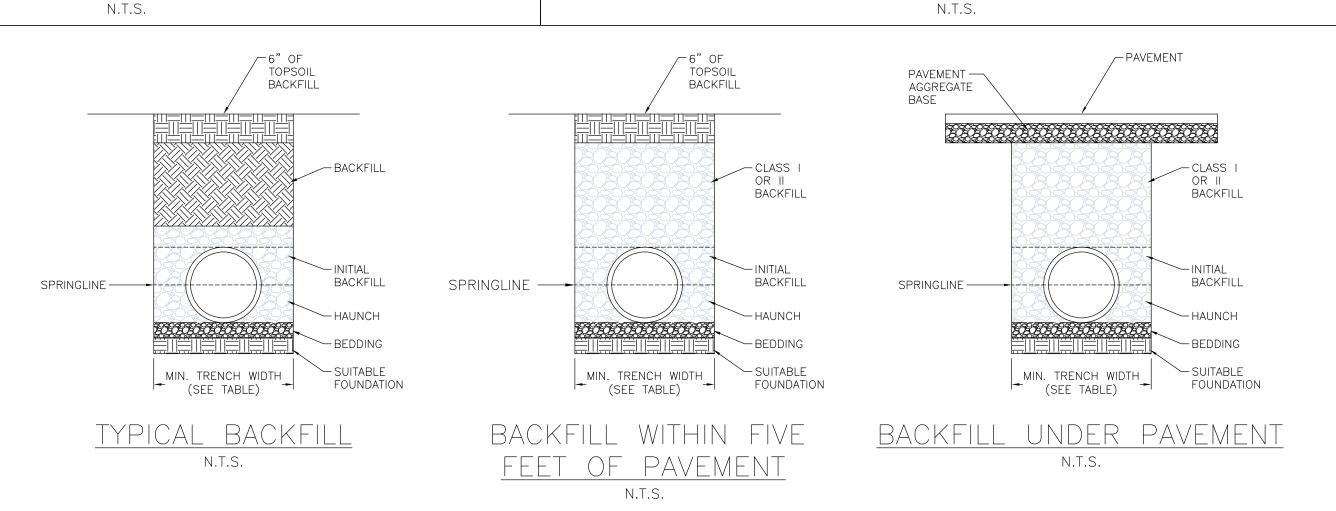
TO BE USED WHEN CLEAR DISTANCE (FROM EXTERIOR PIPE DIAMETER TO EXTERIOR PIPE DIAMETER) BETWEEN SANITARY SEWER PIPING (MAINS, LATERALS, FORCE MAINS, ETC.) AND ALL OTHER PIPES IS 18" OR LESS, PER ENGINEER'S DIRECTION, OR WHERE NOTED ON THE CONSTRUCTION PLANS. A MINIMUM CLEAR DISTANCE OF 3" MUST BE PROVIDED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

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

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

CONCRETE CRADLE DETAIL





12"

15"

18"

24"

30"

36"

42"

48"

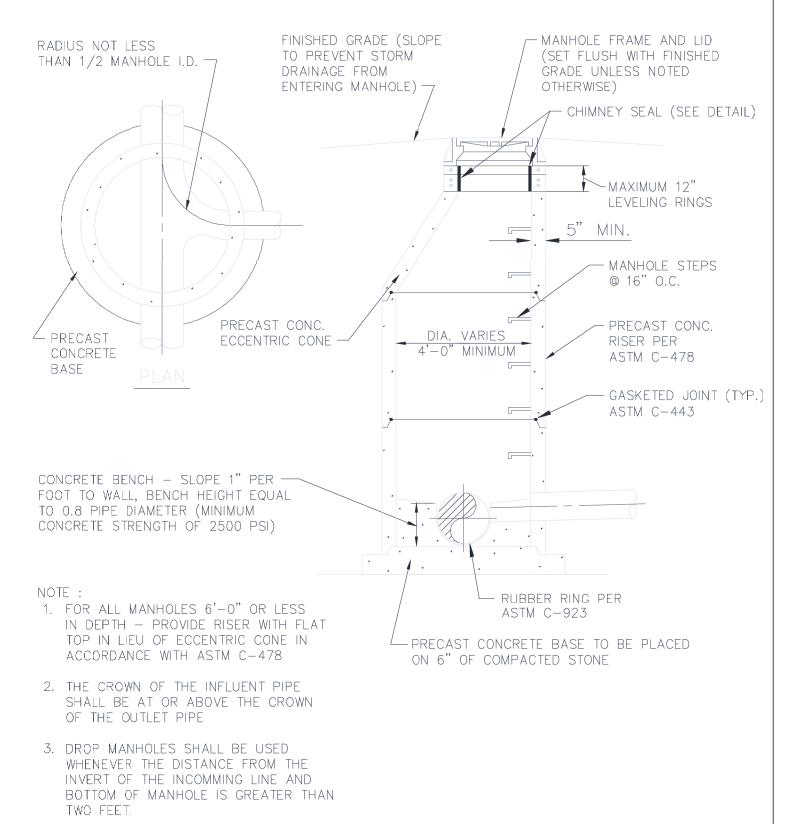
60"

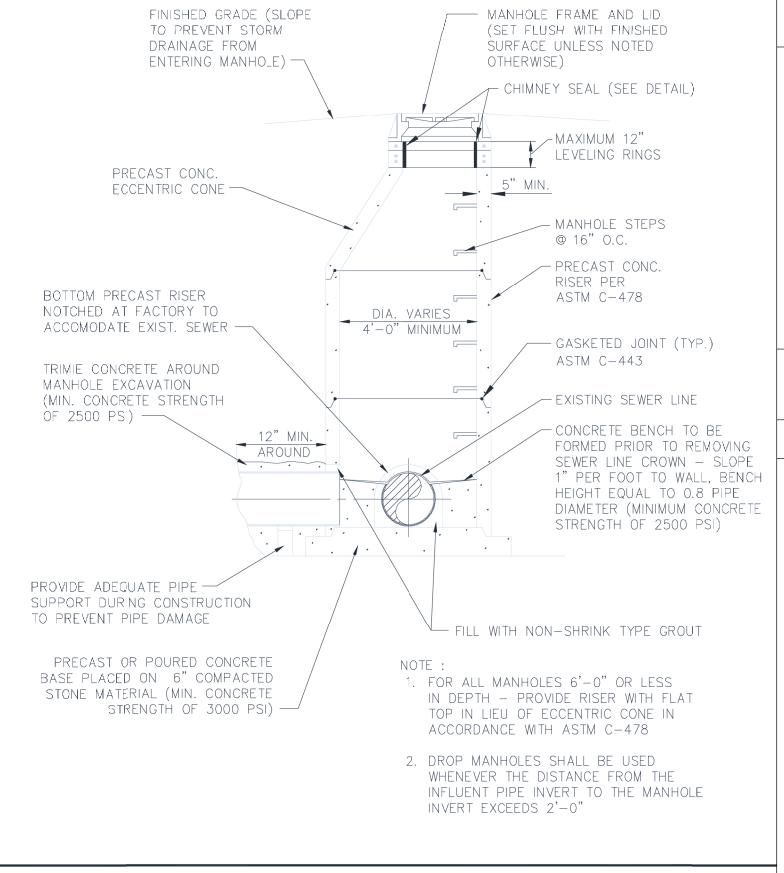
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321 & ASTM C1479, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS" & "STANDARD PRACTICE FOR INSTALLATION OF PRECAST CONCRETE SEWER, STORM DRAIN, AND CULVERT PIPE USING STANDARD INSTALLATIONS", LATEST ADDITIONS.

- 2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- 3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- 4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 4"-24"; 6" FOR 30"-60".
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321 & ASTM C1479, LATEST EDITIONS.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

ADS N-12, ADS HP STORM & RCP INSTALLATION DETAILS





STANDARD MANHOLE DETAIL

CITY of FRANKLIN, INDIANA

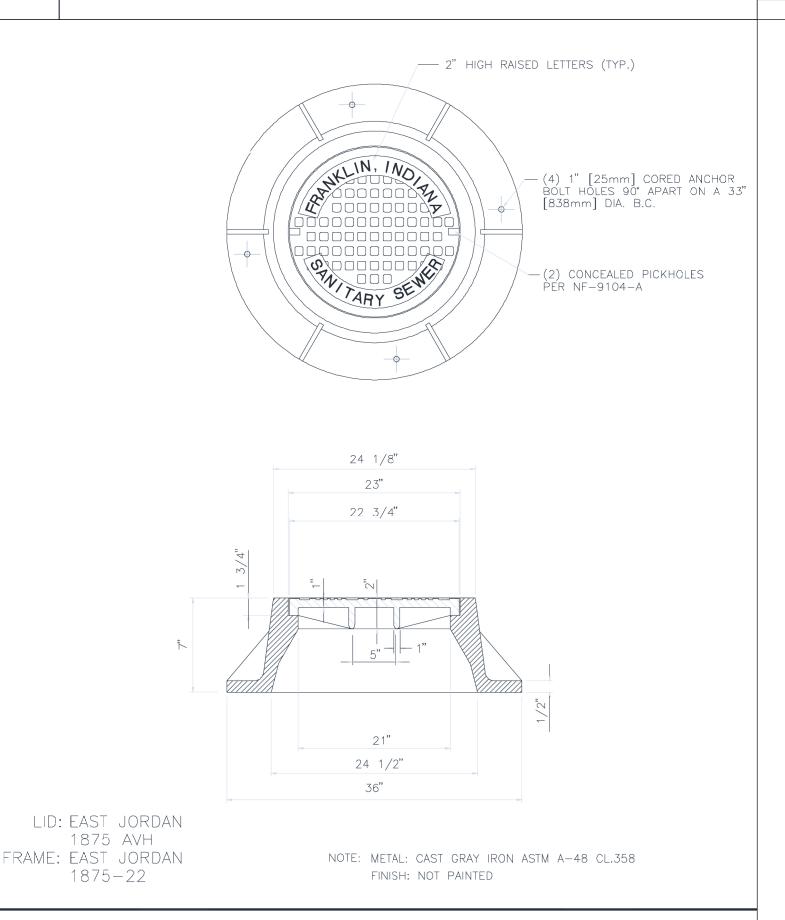
REVISION DATE

FIGURE

CITY of FRANKLIN, INDIANA

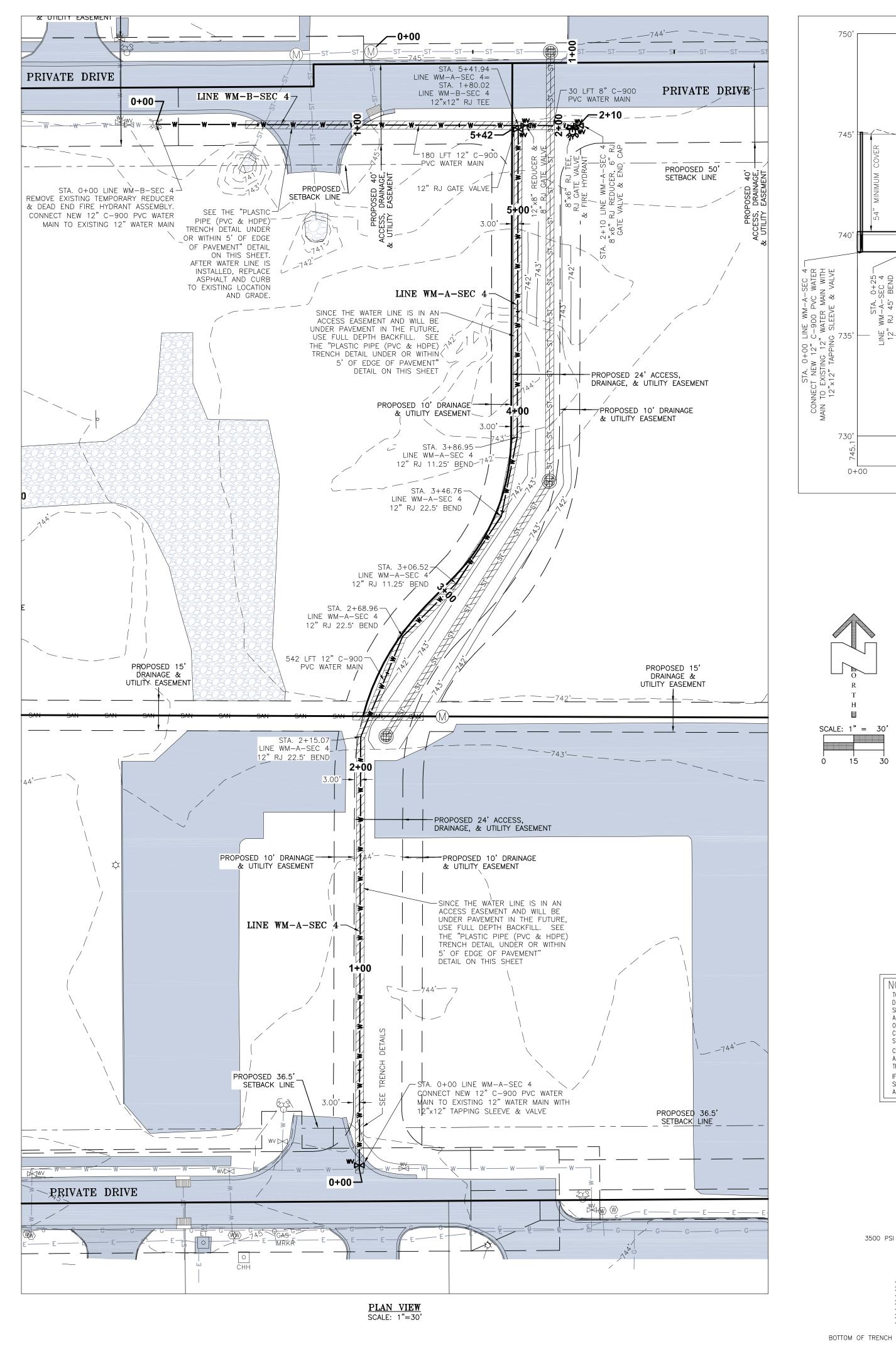
REVISION DATE

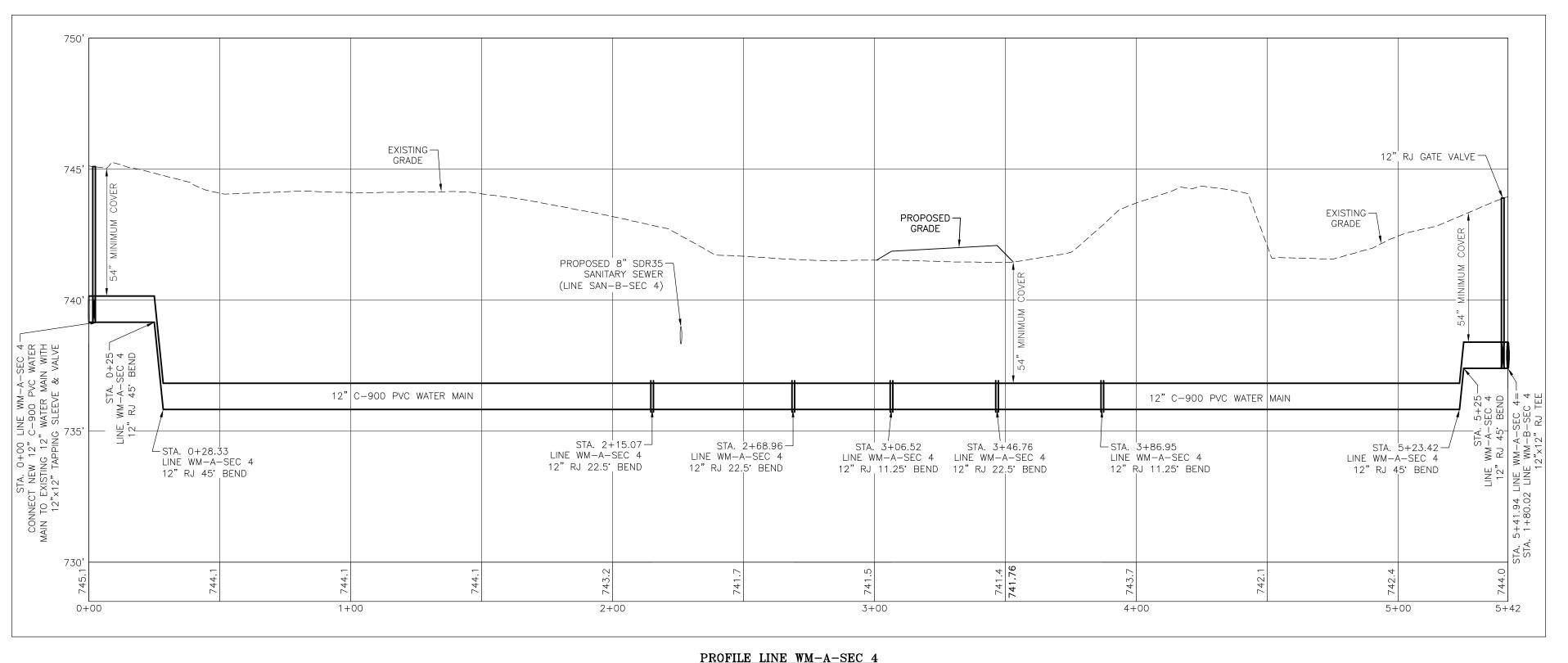
PRECAST MANHOLE ADDED OVER EXISTING SEWER



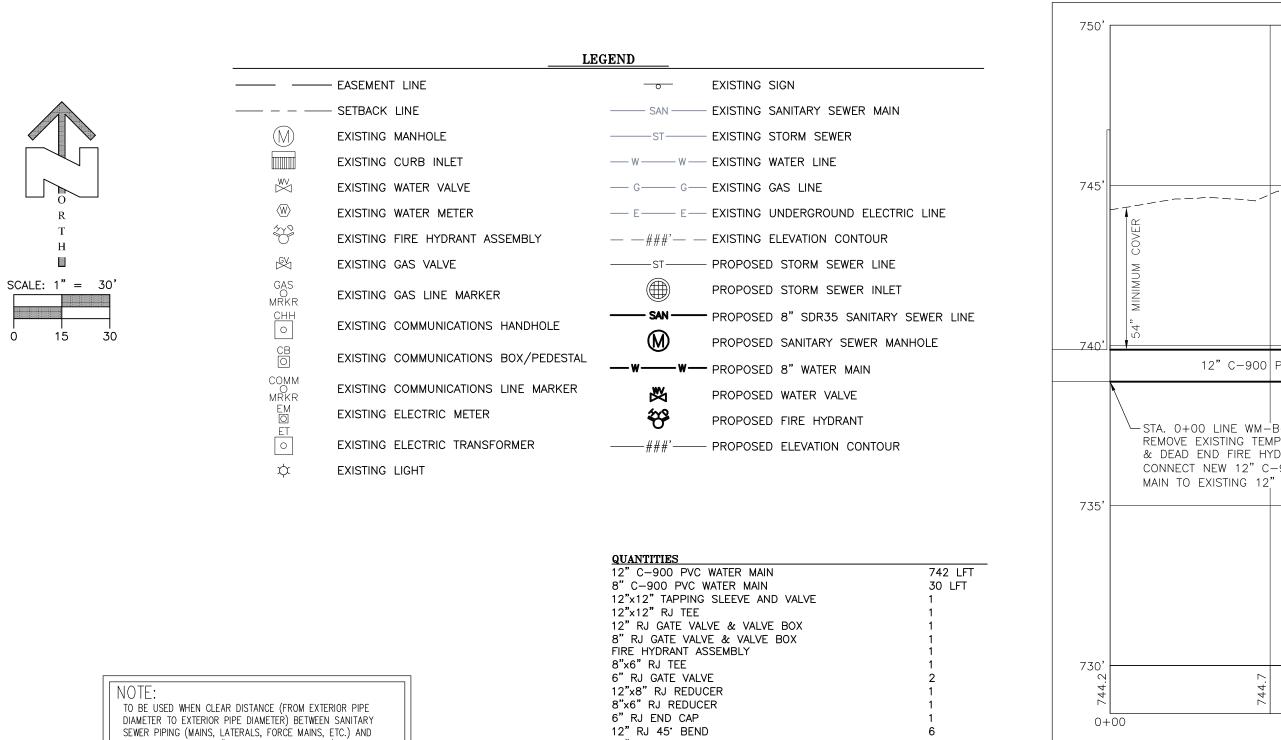
STANDARD FRAME AND LID

CITY of FRANKLIN, INDIANA





PROFILE LINE WM-A-SEC 4 HORIZONTAL SCALE: 1"=30" VERTICAL SCALE: 1"=3"



ALL OTHER PIPES IS 18" OR LESS, PER ENGINEER'S DIRECTION,

OR WHERE NOTED ON THE CONSTRUCTION PLANS. A MINIMUM

CONCRETE MUST NOT COME INTO CONTACT WITH FORCE MAIN.

AT LEAST 3" OF SAND MUST BE PLACED AS A CUSHION AROUND

IF THE CONFLICT IS BETWEEN A WATER MAIN AND ANY SANITARY

CONCRETE CRADLE DETAIL

- CRADLE SHALL BEAR ON UNDISTURBED EARTH

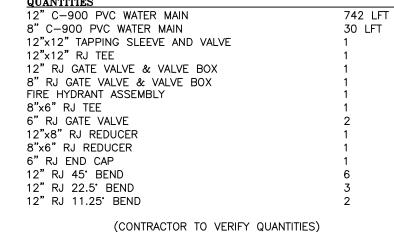
SEWER PIPING, 18" CLEARANCE MUST BE MAINTAINED OR NOTE ABOVE APPLIES AND ONLY GRANULAR FILL MAYBE USED.

CLEAR DISTANCE OF 3" MUST BE PROVIDED TO MAINTAIN

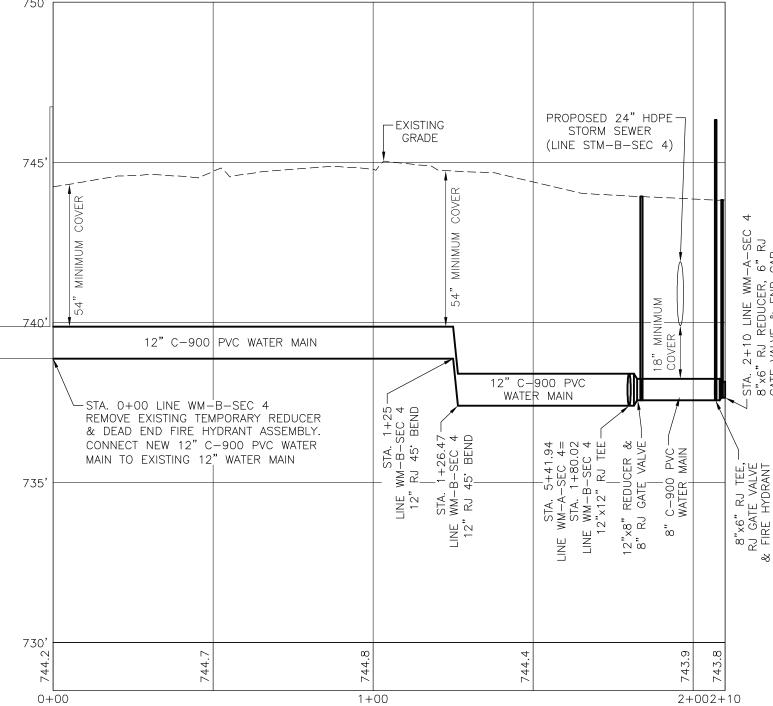
STRUCTURAL INTEGRITY OF THE CONCRETE.

THE FORCE MAIN.

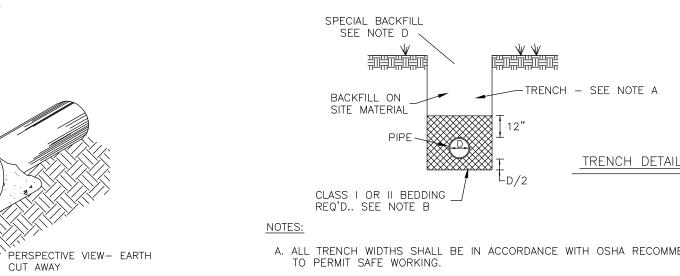
3500 PSI CONCRETE



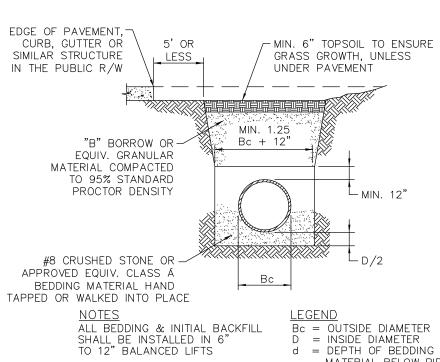
(CONTRACTOR TO VERIFY QUANTITIES)



PROFILE LINE SAN-B-SEC 4 HORIZONTAL SCALE: 1"=30' VERTICAL SCALE: 1"=3"



- A. ALL TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH OSHA RECOMMENDATIONS
- B. ALL PIPE SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER WITH CLASS I OR II BEDDING AND IN ACCORDANCE WITH ASTM D-2321. BACKFILL SHALL BE FREE OF LARGE ROCKS. IN THE EVENT UNUSUAL SOIL CONDITIONS ARE ENCOUNTERED, THE SURVEYOR SHALL BE NOTIFIED BEFORE PIPE IS LAID.
- C. ALL SEWER LINES SHALL BE PVC SDR 35 PIPE IN ACCORDANCE WITH ASTM—3034 WITH RUBBER RING JOINT. SOLVENT WELD JOINT IS NOT ACCEPTABLE.
- D. GRANULAR BACKFILL REQUIRED FOR AREAS UNDER PAVED SURFACES, SEE DETAIL SHEET FOR SHADED AREAS.



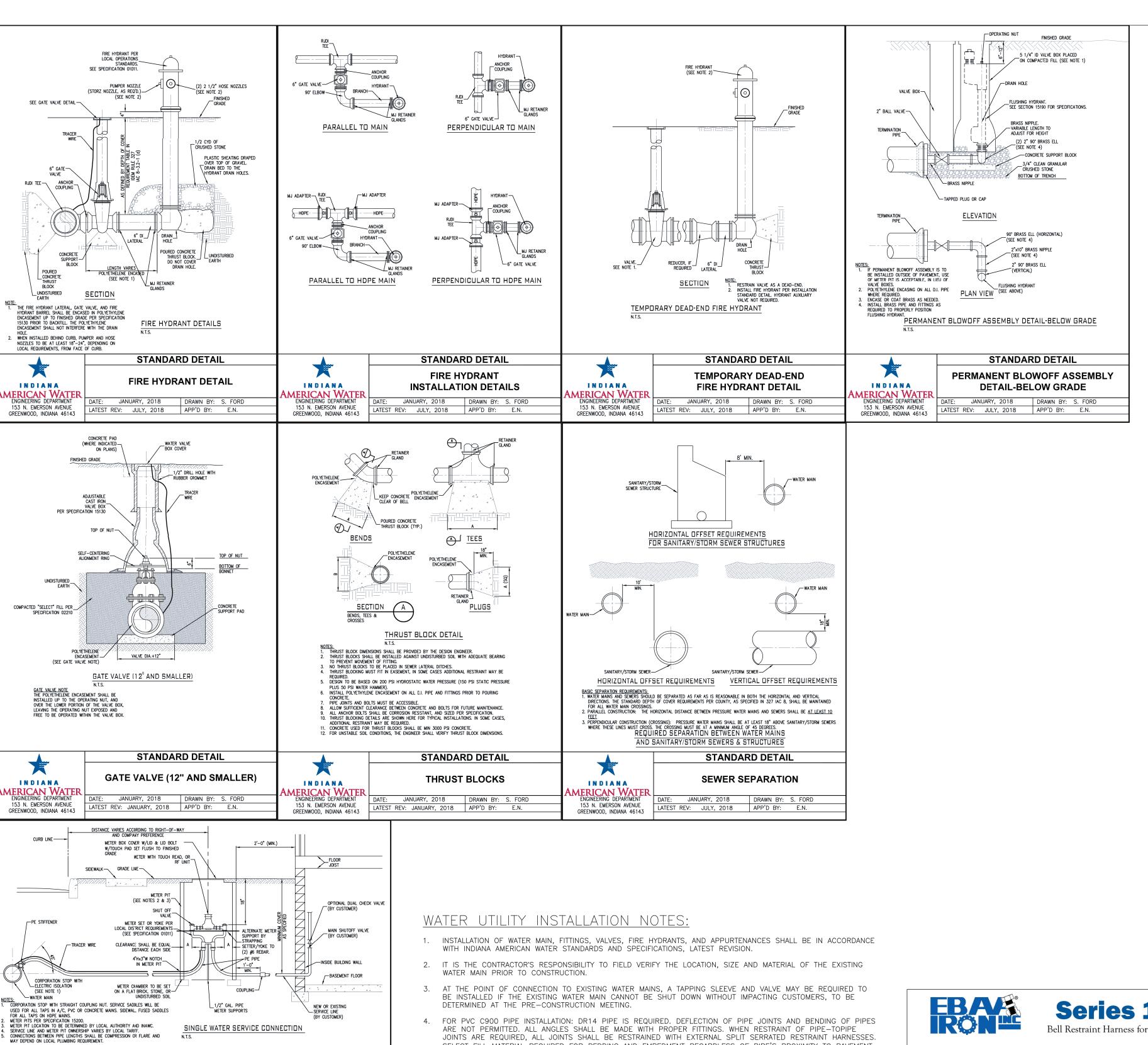
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE A MINIMUM 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE

PLASTIC PIPE (PVC & HDPE) TRENCH DETAIL UNDER OR WITHIN 5' OF EDGE OF PAVEMENT



Plans.dwg

TER AND



- SELECT FILL MATERIAL REQUIRED FOR BEDDING AND EMBEDMENT REGARDLESS OF PIPE'S PROXIMITY TO PAVEMENT. PVC C900 PIPE IS NOT ALLOWED FOR PIPES LARGER THAN 12-INCH.
- 5. FOR DUCTILE IRON PIPE INSTALLATION: THICKNESS CLASS 52 FOR TYPICAL DISTRIBUTION MAINS 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.
- FOR HDPE PIPE INSTALLATION: DIPS DR11 FOR SIZES 4 INCH AND LARGER, IPS DR9 FOR 3 INCH, AND CTS DR9 FOR SIZES SMALLER THAN 3 INCH. HDPE BENDS, TEES, AND CROSSES ARE NOT ACCEPTABLE. PRESSURE TESTING OF HDPE PIPE DIFFERS FROM DUCTILE IRON AND PVC PIPE, SEE SPECIFICATION SECTION 15030-3.03. PIPE FUSION MUST BE COMPLETED BY CERTIFIED TECHNICIAN; CERTIFICATION TO BE SUBMITTED PRIOR TO PRECONSTRUCTION MEETING.
- ENCASE ALL DUCTILE IRON PIPING, DUCTILE IRON FITTINGS, VALVES, HYDRANTS, RESTRAINT HARNESSES, AND ALL OTHER METALLIC APPURTENANCES IN 12MIL BLUE POLYETHYLENE.
- 8. ALL FIRE HYDRANT LATERALS SHALL BE DUCTILE IRON PIPE.

STANDARD DETAIL

SINGLE WATER SERVICE

STANDARD DETAIL

DUAL WATER SERVICE

JANUARY, 2018 DRAWN BY: S. FORD

LATEST REV: JANUARY, 2018 APP'D BY: E.N.

OPTIONAL DUAL CHECK VALVE

(BY CUSTOMER)

___INSIDE BUILDING WALL

_BASEMENT FLOOR

MAIN SHUTOFF VALVE

ATE: JANUARY, 2018 DRAWN BY: S. FORI ATEST REV: JANUARY, 2018 APP'D BY: E.N.

2'-0" (MIN.)

- SETTER/YOKE TO

(2) #6 REBAR

COUPLING-

DUAL WATER SERVICE CONNECTION

INDIANA

MERICAN WATER
ENGNEERING DEPARTMENT
153 N. EMERSON AVENUE

GREENWOOD, INDIANA 46143

DUAL NETER BOX COVER W/LID & LID

DUAL METER PIT (SEE NOTE 3)

(2) METERS WITH TOUCH

BOLT W/TOUCH PAD SET FLUSH TO FINISHED GRADE

DUAL METER SETS OR YOKES PER LOCAL DISTRICT REQUIREMENTS— (SEE SPECIFICATION 01011)

4'Hx3"W NOTCH__ IN METER PIT

SERVICE TO SPLITTER REQ'D.

INDIANA

153 N. EMERSON AVENUE GREENWOOD, INDIANA 46143

SIDEWALK GRADE LINE

CURB LINE ----

PE STIFFENER

__TRACER WIRE

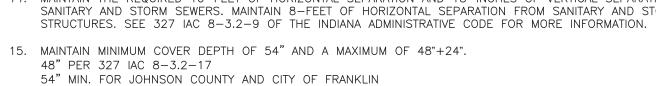
CORPORATION STOP WITH ELECTRIC ISOLATION (SEE NOTE 1)

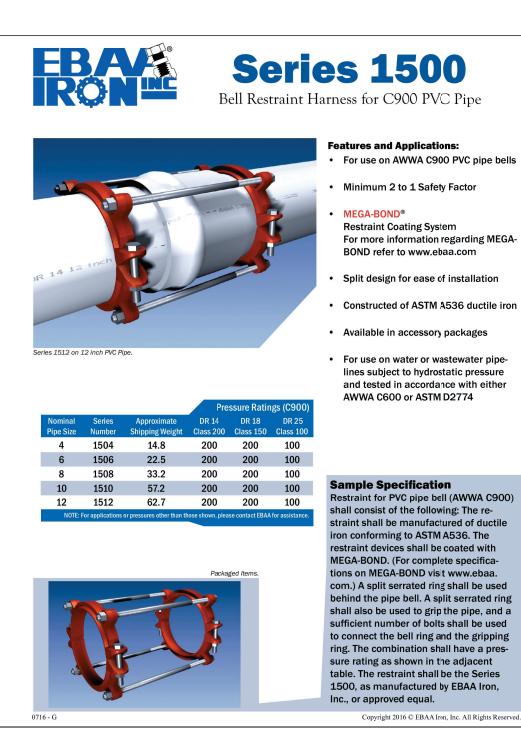
USED FOR ALL TAPS IN A/C, PVC OR CONCRETE MAINS. SIDEWALL FUSION SADDLES FOR HDPE.
METER PITS PER SPECIFICATION 01011.

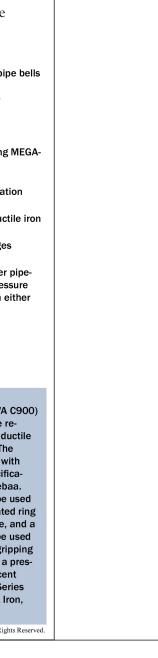
METER PIT LOCATION TO BE DETERMINED BY LOCAL AUTHORITY AND INAWC.
SERVICE LINE AND METER PIT OWNERSHIP VARIES BY LOCAL TARIFF.
CONNEC INO SETWEEN PIPE LENGTHS SHALL BE COMPRESSION OR FLARE AND
MAY DEPEND ON LOCAL PLUMBING REQUIREMENT.

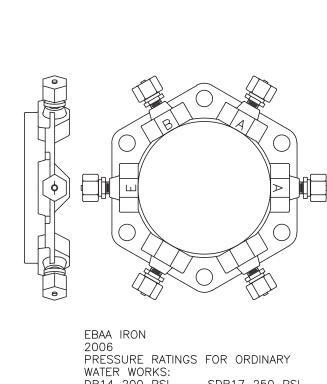
- 9. ALL MJ T-BOLTS AND FLANGE BOLTS SHALL HAVE XYLAN OR FLUOROKOTE #1 CORROSION RESISTANT COATING.
- 10. ALL FITTINGS SHALL BE RESTRAINED USING MJ RETAINER GLANDS.
- 11. THRUST RESTRAINT TO BE ACHIEVED THROUGH THE RESTRAINT OF PIPE JOINTS AND FITTINGS. THRUST BLOCKS ARE NOT AN ACCEPTABLE MEANS OF THRUST RESTRAINT, EXCEPT WHEN REQUIRED IN CONNECTING TO EXISTING WATER MAIN AND FOR INSTALLATION OF FIRE HYDRANTS. SEE SPECIFICATION SECTIONS 15105 AND 15120 FOR PIPE JOINT RESTRAINT REQUIREMENTS FOR DUCTILE IRON AND PVC PIPE.
- 12. COPPER-CLAD STEEL TRACER WIRE REQUIRED ON INSTALLATION OF ALL PIPE. TRACER WIRE SHALL BE TAPED TO PIPE OR POLYETHYLENE ENCASEMENT AT A MINIMUM SPACING OF 10-FEET. SPLICES SHALL BE ENCASED IN WATERPROOF CONNECTORS. WIRE AND CONNECTORS ARE TO BE COMPATIBLE AND FROM THE SAME MANUFACTURER. DETECTABLE TAPE IS REQUIRED ONE FOOT ABOVE PIPE. CONTINUITY SHALL BE TESTED AFTER COMPLETION OF
- 13. SELECT FILL MATERIAL REQUIRED FOR FINAL BACKFILL WHEN WITHIN 5-FEET OF PAVEMENT PER SPECIFICATION
- 14. 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
- 48" PER 327 IAC 8-3.2-17

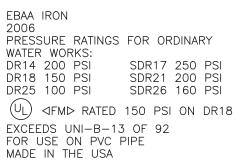
SECTION 02210.REV 12/12/2022.

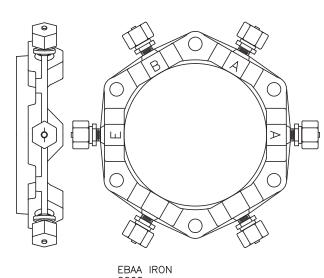






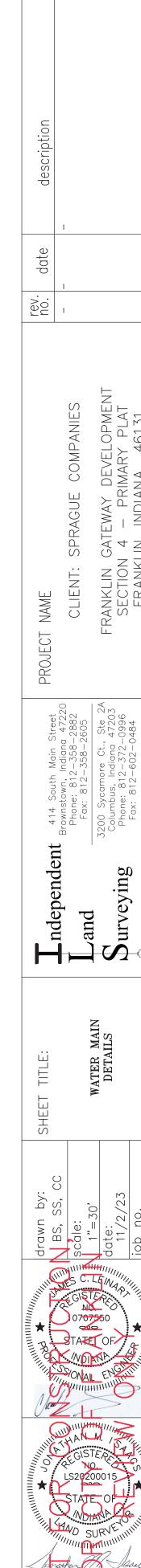


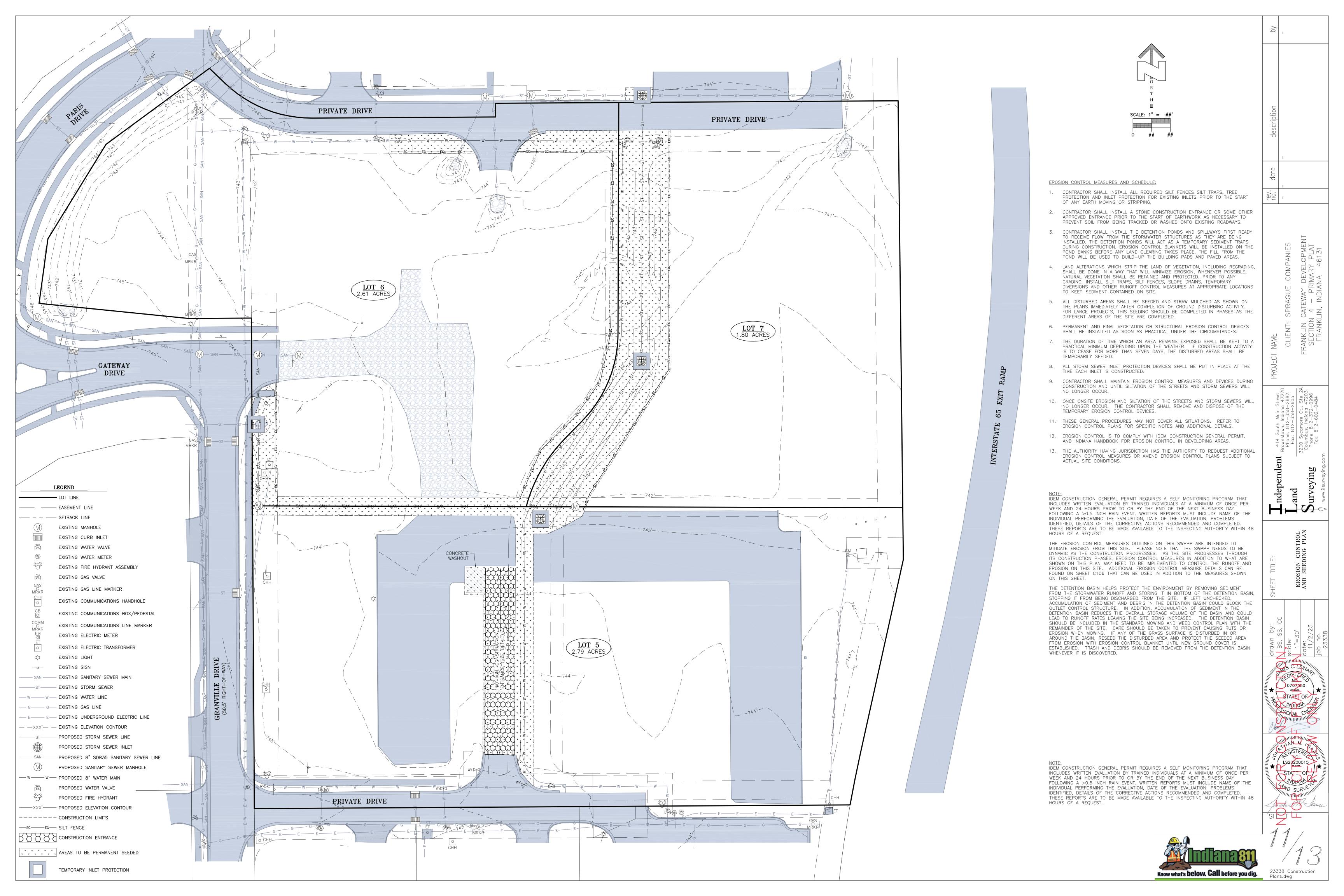




PRESSURE RATINGS FOR ORDINARY WATER WORKS: DR14 200 PSI SDR17 250 PSI DR25 100 PSI SDR26 160 PSI (UL) ⊲FM⊳ RATED 150 PSI ON DR18 EXCEEDS UNI-B-13 OF 92 FOR USE ON PVC PIPE MADE IN THE USA







THE FOLLOWING WAS PREPARED TO ADDRESS THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT RULE FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY AND OBTAIN A PERMIT FOR THIS PROJECT SITE. THE SECTIONS AND SUB-ITEMS CORRESPOND TO THE CONSTRUCTION & STORMWATER POLLUTION PREVENTION PLAN TECHNICAL REVIEW AND COMMENT FORM AS ADMINISTERED BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM). THE CONTRACTOR SHALL BE COMPLETELY AND SOLELY RESPONSIBLE TO ENSURE THAT THE CONSTRUCTION & STORMWATER POLLUTION PREVENTION PLAN IS IMPLEMENTED AND MAINTAINED THROUGHOUT THE PROJECT.

- CONSTRUCTION/STORMWATER POLLUTION PREVENTION PLAN ELEMENTS A1 INDEX OF THE LOCATION OF REQUIRED PLAN ELEMENTS IN THE CONSTRUCTION PLAN:

 REFER TO SHEET 12 — EROSION CONTROL INDEX FOR THE PLAN INDEX SHOWING LOCATIONS OF REQUIRED ITEMS.
- A VICINITY MAP DEPICTING THE PROJECT SITE LOCATION IN RELATIONSHIP TO RECOGNIZABLE LOCAL LANDMARKS, TOWNS, AND MAJOR ROADS: REFER TO THE VICINITY MAP ON SHEET 1 TITLE SHEET.
- A3 NARRATIVE OF THE NATURE AND PURPOSE OF THE PROJECT: HIS PROJECT IS A SUBDIVISION OF SUBJECT LAND INTO THREE LOTS AND INCLUDES IN THE CONSTRUCTION OF INFASTRUCTURE TO SERVICE THE LOTS.
- A4 LATITUDE AND LONGITUDE TO THE NEAREST FIFTEEN (15) SECONDS:
- LAT. 39°29'04" N, LONG. 86°00'59" W A5 <u>LEGAL DESCRIPTION OF THE PROJECT SITE:</u>
- REFER TO SHEETS 1 TITLE SHEET, 2 TOPOGRAPHIC MAP, AND 3 PROPOSED PLAT. A6 11 X 17-INCH PLAT SHOWING BUILDING LOT NUMBERS/BOUNDARIES AND ROAD LAYOUT/NAMES:
 REFER TO SHEET 3 - PROPOSED PLAT FOR THE BOUNDARY OF THE PROJECT, LOT NUMBERS, ROAD LAYOUT AND ROAD NAMES.
- A7 BOUNDARIES OF THE ONE HUNDRED (100) YEAR FLOODPLAINS, FLOODWAY FRINGES, AND FLOODWAYS:
- SUBJECT PROPERTY IS LOCATED IS IN THE MAPPED FLOOD PLAIN (ZONE "X"—UNSHADED (OUTSIDE 500 YEAR FLOOD PLAIN)) ON THE NATIONAL FLOOD INSURANCE RATE MAP - PANEL NUMBER 18081C0232D, DATED AUGUST 2, 2007. A8 LAND USE OF ALL ADJACENT PROPERTIES:
- COMMERCIAL (HOTEL) AND SINGLE-FAMILY RESIDENTIAL (HOMES) TO THE NORTH. COMMERCIAL (HOTEL AND RESTAURANTS) TO THE WEST. COMMERCIAL (RESTAURANTS) TO THE SOUTH. INTERSTATE HIGHWAY (INTERSTATE 65) AND EDUCATIONAL/INSTITUTIONAL (IVY TECH COLLEGE) TO THE EAST.
- A9 <u>IDENTIFICATION OF A U.S. EPA APPROVED OR ESTABLISHED TMDL:</u> THERE APPEAR TO BE NO ESTABLISHED TMDL'S ON THIS PROJECT.
- A10 NAME(S) OF THE RECEIVING WATER(S) STORMWATER RUNOFF FROM THIS PROJECT IS CONVEYED INTO YOUNGS CREEK-AMITY DITCH.
- A11 IDENTIFICATION OF DISCHARGES TO A WATER ON THE CURRENT 303D LIST OF IMPAIRED WATERS AND THE POLLUTANT(S) FOR WHICH IT IS IMPAIRED: CURRENTLY NO DISCHARGES OF WATER INTO THE IMPAIRED WATERS.
- A12 <u>SOIL MAP OF THE PREDOMINANT SOIL TYPES</u>: REFER TO SHEET 12 EROSION CONTROL INDEX FOR THE SOILS MAP AND SOIL PROPERTIES.
- A13 IDENTIFICATION AND LOCATION OF ALL KNOWN WETLANDS, LAKES AND WATER COURSES ON OR ADJACENT TO THE PROJECT SITE: HERE ARE NO IDEM APPOINTED WETLANDS AFFECTING THE CONSTRUCTION AREA.
- A14 <u>IDENTIFICATION OF ANY OTHER STATE OR FEDERAL WATER QUALITY PERMITS OR AUTHORIZATIONS THAT ARE REQUIRED FOR CONSTRUCTION ACTIVITIES:</u>
 THERE APPEAR TO BE NO PERMITS REQUIRED RELATED TO WATER QUALITY AT THIS TIME.
- A16 EXISTING TOPOGRAPHY AT A CONTOUR INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS: EFER TO SHEET 2 — TOPOGRAPHIC MAP FOR EXISTING TOPOGRAPH
- A17 LOCATION(S) OF WHERE RUN-OFF ENTERS THE PROJECT SITE REFER TO SHEET 1 — TOPOGRAPHIC SURVEY FOR EXISTING TOPOGRAPHY

REFER TO SHEET 2 - TOPOGRAPHIC MAP FOR EXISTING TOPOGRAPHY.

- A18 LOCATION(S) OF WHERE RUN-OFF DISCHARGES FROM THE PROJECT SITE PRIOR TO LAND DISTURBANCE: REFER TO SHEET 5 — GRADING PLAN FOR PROPOSED TOPOGRAPHY
- A19 LOCATION OF ALL EXISTING STRUCTURES ON THE PROJECT SITE:
 REFER TO SHEET 2 TOPOGRAPHIC MAP FOR EXISTING TOPOGRAPHY
- A20 EXISTING PERMANENT RETENTION OR DETENTION FACILITIES, INCLUDING MANMADE WETLANDS, DESIGNED FOR THE PURPOSE OF STORMWATER MANAGEMENT: HERE ARE NO KNOWN LOCATIONS.
- A21 LOCATIONS WHERE STORMWATER MAY BE DIRECTLY DISCHARGED INTO GROUND WATER, SUCH AS ABANDONED WELLS, SINKHOLES, OR KARST FEATURES: IERE ARE NO KNOWN LOCATIONS
- A22 <u>SIZE OF THE PROJECT AREA EXPRESSED IN ACRES:</u>
- A23 TOTAL EXPECTED LAND DISTURBANCE EXPRESSED IN ACRES: DISTURBED AREA: 0.74 ACRES
- A24 <u>PROPOSED FINAL TOPOGRAPHY:</u>
 REFER TO SHEET 4 SITE PLAN AND DEMOLITION PLAN, SHEET 5 GRADING PLAN, AND SHEET 6 STORM SEWER PLAN AND PROFILE FOR PROPOSED TOPOGRAPHY AND PROPOSED STORM SEWER.
- A25 <u>LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS:</u>
 REFER TO SHEET 11 EROSION CONTROL FOR THE CONSTRUCTION LIMITS. THE DISTURBED AREAS ARE THE LIMITS OF THE SEEDING SHOWN ON
- A26 LOCATION, SIZE, AND DIMENSIONS OF ALL STORMWATER DRAINAGE SYSTEMS, SUCH AS CULVERTS, STORM SEWERS, AND CONVEYANCE CHANNELS REFER TO SHEET 4 - SITE PLAN AND DEMOLITION PLAN, SHEET 5 - GRADING PLAN, AND SHEET 6 - STORM SEWER PLAN AND PROFILE FOR THE PROPOSED STORMWATER SYSTEM.
- A27 LOCATIONS OF SPECIFIC POINTS WHERE STORMWATER AND NON-STORMWATER DISCHARGES WILL LEAVE THE PROJECT SITE: EFER TO SHEET 4 - SITE PLAN AND DEMOLITION PLAN, SHEET 5 - GRADING PLAN, AND SHEET 6 - STORM SEWER PLAN AND PROFILE FOR PROPOSED TOPOGRAPHY AND PROPOSED STORM SEWER.
- A28 LOCATION OF ALL PROPOSED SITE IMPROVEMENTS, INCLUDING ROADS, UTILITIES, LOT DELINEATION AND IDENTIFICATION, PROPOSED STRUCTURES, AND REFER TO SHEET 4 - SITE PLAN AND DEMOLITION PLAN AND SHEET 5 - GRADING PLAN FOR ALL PROPOSED SITE IMPROVEMENTS.
- A29 <u>LOCATION OF ALL ON-SITE SOIL STOCKPILES AND BORROW AREAS:</u>
 TOPSOIL WILL BE STOCKPILED IN AN AREA CHOSEN BY THE CONTRACTOR.
- A30 CONSTRUCTION SUPPORT ACTIVITIES THAT ARE EXPECTED TO BE PART OF THE PROJECT:
- A31 LOCATION OF ANY IN-STREAM ACTIVITIES THAT ARE PLANNED FOR THE PROJECT INCLUDING, BUT NOT LIMITED TO STREAM CROSSINGS & PUMP AROUNDS: NONE ANTICIPATED.

- B1 DESCRIPTION OF THE POTENTIAL POLLUTANT GENERATING SOURCES AND POLLUTANTS, INCLUDING ALL POTENTIAL NON-STORMWATER DISCHARGES: A. THE MOST ABUNDANT POLLUTANT CAUSED BY CONSTRUCTION WOULD BE SOIL SUSPENDED IN STORM WATER RUNOFF. B. FUEL. OILS. AND OTHER FLUIDS ASSOCIATED WITH THE CONSTRUCTION EQUIPMENT COULD POSSIBLY RUNOFF AS WELL. C. TRASH ASSOCIATED WITH HUMAN ACTIVITY, INCLUDING CONSTRUCTION MATERIALS. D. WASTE CONCRETE LEFT IN THE CONCRETE WASHOUT.
- B2 <u>STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS:</u>
 REFER TO SHEET 11 EROSION CONTROL AND SEEDING PLAN FOR THE LOCATION AND SIZE OF THE CONSTRUCTION ENTRANCE AND THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE DETAIL ON SHEET 13 - EROSION CONTROL DETAILS.
- B3 SPECIFICATIONS FOR TEMPORARY AND PERMANENT STABILIZATION:

TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON: UN-VEGETATED AREAS THAT ARE LEFT IDLE OR SCHEDULED TO BE LEFT INACTIVE MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITH MEASURES APPROPRIATE FOR THE SEASON TO MINIMIZE EROSION POTENTIAL. TO MEET THIS REQUIREMENT, THE FOLLOWING APPLY: STABILIZATION MUST BE INITIATED BY THE END OF THE SEVENTH DAY THE AREA IS LEFT IDLE. THE STABILIZATION ACTIVITY MUST BE COMPLETED WITHIN FOURTEEN DAYS AFTER INITIATION. INITIATION OF STABILIZATION INCLUDES, BUT IS NOT LIMITED TO, THE SEEDING AND/OR PLANTING OF THE EXPOSED AREA AND APPLYING MULCH OR OTHER TEMPORARY SURFACE STABILIZATION METHODS WHERE APPROPRIATE. AREAS THAT ARE NO ACCESSIBLE DUE TO AND UNEXPECTED OR DISRUPTIVE EVENT THAT PREVENTS CONSTRUCTION ACTIVITIES ARE NOT CONSIDERED IDLE. AREAS THAT HAVE BEEN COMPACTED MAY BE EXCLUDED FROM THE STABILIZATION REQUIREMENT WHEN THE AREAS ARE INTENDED TO BE IMPERVIOUS SURFACES ASSOCIATED WITH THE FINAL LAND USE. PROVIDED RUN-OFF FROM THE AREA IS DIRECTED TO APPROPRIATE SEDIMENT CONTROL MEASURES. REFER TO THE "SEASONAL SOIL PROTECTION CHART" SHOWN ON SHEET C108. FERTILIZER APPLICATIONS ASSOCIATED WITH THE STABILIZATION PLAN FOR THE PROJECT MUST MEET THE FOLLOWING REQUIREMENTS: A. APPLY FERTILIZER AT A RATE AND AMOUNT AS DETERMINED BY A SOIL ANALYSIS OR IN ACCORDANCE WITH THE INDIANA STORMWATER QUALITY MANUAL OR SIMILAR GUIDANCE DOCUMENTS. B. APPLY FERTILIZER AT AN APPROPRIATE TIME OF YEAR FOR THE PROJECT LOCATION, TAKING INTO CONSIDERATION PROXIMITY TO A WATERBODY, AND PREFERABLY TIME TO COINCIDE WITH THE PERIOD OF MAXIMUM VEGETATIVE UPTAKE AND GROWTH. . AVOID APPLYING FERTILIZER IMMEDIATELY PRIOR TO PRECIPITATION EVENTS THAT ARE ANTICIPATED TO RESULT IN STORMWATER RUN-OFF FROM THE APPLICATION AREA.

PERMANENT SURFACE STABILIZATION SPECIFICATIONS: REFER TO SHEET 11 - EROSION CONTROL AND SEEDING PLAN FOR LOCATIONS AND THE DETAILS ON SHEET 13 - EROSION CONTROL DETAILS FOR SPECIFICATIONS. FINAL STABILIZATION OF A PROJECT SITE IS ACHIEVED WHEN: ALL LAND-DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM (EVENLY DISTRIBUTED, WITHOUT, LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF SEVENTY PERCENT HAS BEEN ESTABLISHED ON ALL UNPAVED DISTURBED AREAS, AND AREAS NOT COVERED BY PERMANENT STRUCTURES, OR EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED. THIS REQUIREMENT DOES NOT APPLY TO:

A. LANDSCAPING THAT IS PART OF THE FINAL PROJECT PLAN. THIS IS CONSIDERED STABLE WHEN THE PLAN HAS BEEN FULLY IMPLEMENTED AN AREAS NOT BEING VEGETATED ARE STABLE WITH A NON-EROSIVE MATERIAL AND/OR PRODUCT. B. PROJECTS OR SPECIFIC STORMWATER MEASURES THAT UTILIZE NATIVE VEGETATION AND/OR SPECIAL VEGETATIVE PLANTINGS THAT ARE EITHER REQUIRED BY A WATER QUALITY PERMIT/AUTHORIZATION OR PART OF THE DESIGN AND FUNCTIONALITY OF A STORMWATER MEASURE PROVIDED THE ACTIVITY DOES NOT POSE A THREAT THAT WILL RESULT IN OFF-SITE SEDIMENTATION. C. PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES WHEN: 1.STABILIZATION IS COMPLETED IN ACCORDANCE WITH SECTION 3.4(a) AS LAND-DISTURBANCE PROGRESSES. LAND THAT IS RETURNED TO AGRICULTURAL PRODUCTION MUST BE TEMPORARILY OR PERMANENTLY SEEDED UPON COMPLETED LAND—DISTURBING ACTIVITIES. STABILIZATION REQUIREMENTS MAY BE WAIVED BY THE INSPECTING AUTHORITY IF THE PROJECT SITE DOES NOT POSE A THREAT OF DISCHARGING SEDIMENT. 2. DISTURBED AREAS NOT PREVIOUSLY USED FOR AGRICULTURAL PRODUCTION, SUCH AS FILTER STRIPS, MUST BE RETURNED TO THEIR PRE-LAND DISTURBANCE USE. D. SPECIFIC PROJECTS, DUE TO FUNCTION AND/OR OPERATION MAY NECESSITATE THAT AN AREA REMAIN DISTURBED. ONLY THE MINIMUM OPERATIONAL AREA IS ALLOWED TO RÉMAIN UNDISTURBED. THIS OPTION PRIMARILY APPLIES TO OFF-ROAD RECREATIONAL COMMERCIAL OPERATIONS BUT MAY APPLY TO OTHER LAND USE TYPES UPON DETERMINATION BY THE

- B4 <u>SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS:</u> CONCENTRATED FLOWS OCCUR IN CHANNELS. STABILIZATION WILL OCCUR WITH TEMPORARY CHECK DAMS AND RIPRAP OUTFALLS. REFER TO SHEET 11 - EROSION CONTROL AND SEEDING PLAN FOR THE LOCATION OF CHECK DAMS AND SHEET 13 -EROSION CONTROL DETAILS FOR DETAILS AND SPECIFICATIONS.
- B5 <u>SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS:</u> SILT FENCE AND/OR STRAW WATTLES ARE PROPOSED TO CONTROL EROSION FROM SHEET FLOW AREAS. REFER TO SHEET 11 -EROSION CONTROL AND SEEDING PLAN FOR THE LOCATION OF THE SILT FENCE/WATTLES AND SHEET 13 - EROSION CONTROL DETAILS FOR DETAILS AND SPECIFICATIONS.
- B6 RUN-OFF CONTROL MEASURES: THERE ARE NO RUNOFF CONTROL MEASURES ANTICIPATED ON THIS PROJECT. TEMPORARY ROCK CHECK DAMS ARE SHOWN FOR CONCENTRATED FLOW AREAS.
- B7 STORMWATER OUTLET PROTECTION LOCATIONS AND SPECIFICATIONS ALL PROPOSED PIPE OUTLETS WILL UTILIZE AN END SECTION, ENERGY DISSIPATION STRUCTURE, AND RIP RAP OUTFALL APPROPRIATE TO THE PIPE SIZE AND DISCHARGE. REFER TO SHEET 11 — EROSION CONTROL AND SEEDING PLAN FOR STORM SEWER OUTLET PROTECTION LOCATIONS AND SHEET 13 - EROSION CONTROL DETAILS FOR DETAILS AND SPECIFICATIONS.
- B8 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS:
 THERE ARE NO GRADE STABILIZATION STRUCTURES ANTICIPATED ON THIS PROJECT.
- B9 <u>DEWATERING APPLICATIONS AND MANAGEMENT METHODS:</u> DEWATERING IS NOT ANTICIPATED ON THIS PROJECT.
- B10 MEASURES UTILIZED FOR WORK WITHIN WATERBODIES: WORK WITHIN WATERBODIES IS NOT ANTICIPATED ON THIS PROJECT.
- B11 <u>MAINTENANCE GUIDELINES FOR EACH PROPOSED TEMPORARY STORMWATER QUALITY MEASURE:</u>
 MONITORING AND MAINTENANCE OF ALL POLLUTION PREVENTION MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INSPECT ALL MEASURES AT LEAST ONCE A WEEK AND AFTER EACH STORM EVENT. THE CONTRACTOR SHALL PREPARE A WRITTEN REPORT FOR EACH INSPECTION NOTING CONDITIONS AND MAINTENANCE PROVIDED. A COPY OF EACH REPORT SHALL BE KEPT ON FILE AT THE PROJECT SITE.

TEMPORARY CONSTRUCTION ROAD MAINTENANCE: INSPECT DAILY.

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

SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

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

FROSION CONTROL BLANKET:

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

INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, INSTALL AN EROSION-RESISTANT LINER IN THAT PORTION OF THE CHANNEL REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE DAM TO

MAINTAIN CHANNEL CAPACITY, ALLOW DRAINAGE THROUGH THE DAM, AND PREVENT LARGE FLOW FROM DISPLACING SEDIMENT ADD RIPRAP AND AGGREGATE AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION OF

WHEN DAMS ARE NO LONGER NEEDED, REMOVE THE RIPRAP AND AGGREGATE AND STABILIZE THE CHANNEL, USING AN EROSION-RESISTANT LINING IF NECESSARY. (RIPRAP AND AGGREGATE FROM THE DAM MAY BE REMOVED OR UTILIZED TO STABILIZE THE CHANNEL.)

DROP INLET PROTECTION: INSPECT DAILY. REMOVE SEDIMENT WHEN POOL AREA IS APPROXIMATELY ONE—HALF FULL OF SEDIMENT.

REMOVE AND REPLACE AGGREGATE IF SEDIMENT HINDERS DRAINAGE. ONCE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, REMOVE SEDIMENT, SEAL WEEP HOLES, FILL BASIN WITH SOIL, COMPACT AND GRADE TO FINISHED ELEVATION AND STABILIZE.

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

INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, DISLODGE OR SLUMPING WATTLES. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE WATTLE AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE WATTLE, STAKES AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.

ALL CONCRETE SHALL BE DISPOSED OF IN THE DESIGNATED AREA. THIS AREA SHALL BE INSPECTED ON A DAILY BASIS AS MINIMUM. WHEN THIS AREA BECOMES HALF FULL, THE POLLUTANTS SHALL BE EXCAVATED, PLACED IN AN ACCEPTABLE CONTAINER AND DISPOSED OF IN A PROPER MANNER.

B12 PLANNED CONSTRUCTION SEQUENCE DESCRIBING THE RELATIONSHIP BETWEEN IMPLEMENTATION OF STORMWATER QUALITY MEASURES IN RELATION TO LAND DISTURBANCE:

A PRE-CONSTRUCTION MEETING WITH THE OWNER, CONTRACTOR, STORMWATER COORDINATOR AND APPOINTED TRAINED INDIVIDUAL SHALL BE REQUIRED BEFORE LAND DISTURBING COMMENCES. GRAVEL CONSTRUCTION ENTRY AND SILT FENCE WILL BE INSTALLED PRIOR TO ANY CONSTRUCTION. TOPSOIL WILL BE STRIPPED AND STOCKPILED WITH SILT FENCE INSTALLED AROUND THE PERIPHERY. ROCK CHECK DAMS, INLET PROTECTION AND RIPRAP OUTFALLS WILL BE INSTALLED AS THE SWALES AND STRUCTURES ARE CONSTRUCTED. TEMPORARY SEEDING SHALL OCCUR AS NECESSARY AS SPELLED OUT IN THE SCHEDULE WHEN ALL CONSTRUCTION IS COMPLETE; NO ACTIVE EROSION IS EVIDENT ON THE PROJECT, ALL BARE AREAS HAVE BEEN DRESSED AND VEGETATION RE-ESTABLISHED, TEMPORARY MEASURES MAY BE REMOVED, THE ENTIRE SITE HAS BEEN STABILIZED (70% UNIFORM DENSITY OF PERMANENT VEGETATION), NO OTHER EARTH MOVING ACTIVITIES ARE PLANNED FOR THE PROJECT, ALL POST CONSTRUCTION BMP'S HAVE BEEN INSTALLED AND FUNCTIONING TO FULL CAPACITY AND THE REMOVAL OF ALL SEDIMENT IN SWALES, A FINAL RELEASE INSPECTION MUST BE SCHEDULED WITH THE STORMWATER COORDINATOR TO CLOSE OUT THE PERMIT. A BMP MEETING WILL BE REQUIRED WITH THE CONTRACTOR, OWNER AND OR/LESSEE, AND THE CITY STORMWATER COORDINATOR AT THE TIME OF CERTIFICATE OF OCCUPANCY. THE NOTICE OF TERMINATION IDEM FORM SHALL BE SUBMITTED TO THE STORMWATER COORDINATOR AT THIS TIME TO RECEIVE APPROVAL SIGNATURE AND THE SUBMITTED TO IDEM TO CLOSE OUT THE STATE PERMIT.

- B13 PROVISIONS FOR EROSION AND SEDIMENT CONTROL ON INDIVIDUAL BUILDING LOTS REGULATED UNDER THE PROPOSED PROJECT: REFER TO SHEET 13 - EROSION CONTROL DETAILS FOR DETAILS.
- B14 <u>MATERIAL HANDLING AND SPILL PREVENTION AND SPILL RESPONSE PLAN MEETING THE REQUIREMENTS IN 327 IAC 2-6.1:</u>
 ALL MATERIALS ON-SITE WILL BE HANDLED PER THE REQUIREMENTS OF THE MSDS SHEETS. THE CONTRACTOR SHALL HAVE AN EMERGENCY SPILL CLEAN-UP KIT ON SITE FOR RECOVERY OF PETROLEUM PRODUCT SPILLS AT ALL TIMES. IF A REPORTABLE AMOUNT OF SEDIMENT LADEN WATER OR OTHER POLLUTANT IS ALLOWED TO LEAVE THE SITE, THE CONTRACTOR IS OBLIGATED TO NOTIFY IDEM'S SPILL LINE AT (317) 233-7745 WITHIN 24 HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINES AND ANY LIABILITY ASSOCIATED WITH SUCH AN EVENT. SEDIMENT LADEN WATER, WHICH OTHERWISE WOULD FLOW FROM THE PROJECT SITE, SHALL BE TREATED BY EROSION AND SEDIMENT CONTROL MEASURES APPROPRIATE TO MINIMIZE SEDIMENTATION. ALL WATER (INCLUDING STORMWATER, GROUNDWATER, OR ANY OTHER WATER) THAT LEAVES THE CONSTRUCTION SITE MUST HAVE A TOTAL SÚSPENDED SOLIDS LEVEL OF LESS THAN 50 PARTS PER MILLION OR HAVE NO VISIBLE SEDIMENT. I'HIS CAN BE DETERMINED ON SITE BY TAKING A SETTLEABLE SOLIDS SAMPLE WITH AN IMHOFF CONE WITH A RESULT OF LESS THAN 0.5 ML PER LITER. IT SHOULD BE EXPECTED THAT ALL MATERIALS NECESSARY TO CONSTRUCT THE PROPOSED SITE IMPROVEMENTS WILL BE ENCOUNTERED ON SITE AT ONE TIME OR ANOTHER. ALL MATERIALS THAT APPEAR ON SITE WILL BE ACCOMPANIED WITH MSDS SHEETS IN ACCORDANCE WITH OSHA GUIDELINES AND THE CODE OF FEDERAL REGULATION (CFR). MSDS SHEETS PROVIDE AMONG OTHER THINGS, THE PROCEDURES FOR CLEAN-UP OF SPILLS AND LEAKS.
- MATERIAL HANDLING AND STORAGE PROCEDURES ASSOCIATED WITH CONSTRUCTION ACTIVITY DUMPSTERS WILL BE PROVIDED FOR DISPOSAL OF ALL WASTE AS NEEDED AND A CONCRETE WASH OUT AREA WILL BE FACILITATED AND MAINTAINED THROUGHOUT THE PROJECT. WASTE CONTAINERS MUST BE MANAGED TO REDUCE DISCHARGE OF POLLUTANTS AND BLOWING OF DEBRIS. RECEPTACLES THAT ARE NOT MANAGED WILL REQUIRE A COVER/LID TO MINIMIZE EXPOSURE OF WASTES TO PRECIPITATION AND DISCHARGE OF POLLUTANTS. WASTE NOT DISPOSED OF IN TRASH RECEPTACLES MUST BE PROTECTED FROM EXPOSURE TO WEATHER AND/OR REMOVED FROM THE SITE AT THE END OF THE DAY AND DISPOSED OF PROPERLY, ALL CEMENTITIOUS WASH MATERIAL. (I.E. MORTAR, PLASTER, STUCCO, GROUT, CONCRETE) INCLUDING CLEANING OF TOOLS IS REQUIRED TO BE COLLECTED AND DISPOSED OF APPROPRIATELY.
- <u>DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE:</u>
 THE MAIN POST CONSTRUCTION POLLUTANTS WILL COME FROM VEHICULAR TRAFFIC ON THE PAVED DRIVES AND PARKING AREAS AND LITTER. IN ADDITION TO THE LITTER, THE POLLUTANTS MAY INCLUDE FUEL, OIL, ANTIFREEZE, SUSPENDED SOLIDS, NITROGEN, PHOSPHORUS, COPPER, LEAD, AND ZINC.
- <u>DESCRIPTION OF PROPOSED POST—CONSTRUCTION STORMWATER MEASURES:</u>
 THE MAJORITY OF THE SITES STORMWATER WILL BE ROUTED INTO AN EXISTING DETENTION AREA.

CrA

- C3 PLAN DETAILS FOR EACH STORMWATER MEASURE: REFER TO SHEET 4 - SITE PLAN AND DEMOLITION PLAN, SHEET 5 - GRADING PLAN, SHEET 6 - STORM SEWER PLAN AND PROFILE, AND SHEET 8 - STORM SEWER AND SANITARY SEWER DETAILS FOR RELATED DESIGN AND DETAILS.
- C4 <u>SEQUENCE DESCRIBING STORMWATER MEASURE IMPLEMENTATION:</u> TINAL GRADING WILL TAKE PLACE ONCE ALL CONSTRUCTION HAS BEEN COMPLETED. THE FINAL VEGETATION OF THE SITE WILL TAKE PLACE ONCE ALL EARTH MOVING HAS BEEN FINALIZED.
- C5 <u>MAINTENANCE GUIDELINES FOR PROPOSED POST—CONSTRUCTION STORMWATER MEASURES:</u>
 A. THE PROPOSED VEGETATED WATERWAYS AND DETENTION AREA BANKS ARE TO BE MAINTAINED REGULARLY AND THE VEGETATION IS TO REMAIN HEALTHY. TYPICAL PROPERTY MAINTENANCE AND UPKEEP SHOULD KEEP VEGETATION HEALTHY SUCH AS SEEDING, TRIMMING AND MOWING OF VEGETATION. ANY GRASSED OR VEGETATED AREAS THAT EXPERIENCE EROSION FROM RAINFALL EVENTS SHOULD BE REPAIRED AND RE-VEGETATED AS SOON AS POSSIBLE
 - EROSION OF THE BANKS OF THE DETENTION AREA AND SLOPES 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 OF ANY BERMS OR SWALES. THE DETENTION AREA SHOULD ALSO BE MONITORED FOR SEDIMENT. IF THE BOTTOM OF THE DETENTION AREA RECEIVE ANY SIGNIFICANT SEDIMENT (MORE THAN 25% OF THE POND OR DITCH VOLUME), THE SEDIMENT SHOULD BE REMOVED AND REPLACED
 - PAVEMENT AREAS SHOULD BE REGULARLY INSPECTED 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. FINALLY, 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.

MnB2

C6 ENTITY THAT WILL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF THE POST-CONSTRUCTION STORMWATER MEASURES: HE OWNER WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE POST CONSTRUCTION SYSTEM.



SOIL DESCRIPTIONS

2 to 6 percent slopes, eroded 0 to 2 percent slopes

Map Unit Setting National map unit symbol: 2zss9 Elevation: 520 to 1,360 feet Mean annual precipitation: 35 to 46 inches Mean annual air temperature: 46 to 55 degrees F Frost-free period: 140 to 190 days Farmland classification: All areas are prime farmland

Map Unit Composition Miami, eroded, and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Miami, Eroded

MnB2 - Miami silt loam,

Landform: Moraines, till plains Landform position (two-dimensional): Shoulder, backslope Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Linear Parent material: Loess over loamy till

Typical profile Ap - 0 to 8 inches: silt loam Bt1 - 8 to 13 inches: silty clay loam 2Bt2 - 13 to 28 inches: clay loam 2BCt - 28 to 33 inches: loam 2Cd - 33 to 79 inches: loam

Slope: 2 to 6 percent Depth to restrictive feature: 24 to 40 inches to densic Drainage class: Moderately well drained Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr) Depth to water table: About 24 to 36 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum content: 45 percent Maximum salinity: Nonsaline to very slightly saline (0.0 to

2.0 mmhos/cm)

Hydric soil rating: No

Interpretive groups Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: C

Ecological site: F111XA009IN - Till Ridge

Available water supply, 0 to 60 inches: Low (about 4.9

Minor Components Crosby, eroded Percent of map unit: 9 percent Landform: Recessionial moraines, ground moraines, water—lain moraines Landform position (two-dimensional): Summit, backslope, Landform position (three-dimensional): Interfluve, rise Down-slope shape: Convex Across-slope shape: Linear Ecological site: F111XA008IN - Wet Till Ridge Hydric soil rating: No

Percent of map unit: 4 percent Landform: Depressions, till plains Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Dip Down-slope shape: Concave, linear Across-slope shape: Concave Ecological site: F111XA007IN - Till Depression Flatwood Hydric soil rating: Yes

Treaty, frequently ponded, drained Percent of map unit: 2 percent Landform: Swales, water-lain moraines, depressions Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Ecological site: F111XA007IN — Till Depression Flatwood Hydric soil rating: Yes

CrA — Crosby silt loam, fine—loamy subsoil,

Map Unit Setting National map unit symbol: 2thy4 Elevation: 600 to 1,000 feet Mean annual precipitation: 36 to 44 inches Mean annual air temperature: 49 to 54 degrees F Frost-free period: 145 to 180 days Farmland classification: Prime farmland if drained

Map Unit Composition Crosby and similar soils: 93 percent Minor components: 7 percent Description of Crosby

Landform: Recessionial moraines, ground moraines, water-lain moraines Landform position (two-dimensional): Summit, backslope, Landform position (three-dimensional): Interfluve, rise Down-slope shape: Convex, linear Across-slope shape: Linear, convex Parent material: Silty material or loess over loamy till

Typical profile Ap - 0 to 10 inches: silt loam Btg - 10 to 17 inches: silty clay loam 2Bt - 17 to 29 inches: clay loam 2BCt - 29 to 36 inches: loam 2Cd - 36 to 79 inches: loam

2.0 mmhos/cm)

Hydrologic Soil Group: C/D

Hydric soil rating: No

Hydric soil rating: No

Hydric soil rating: Yes

Properties and qualities Slope: 0 to 2 percent Depth to restrictive feature: 24 to 40 inches to densic Drainage class: Somewhat poorly drained Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr) Depth to water table: About 6 to 24 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum content: 55 percent

Available water supply, 0 to 60 inches: Moderate (about 6.5 inches) Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2w

Minor Components Williamstown, eroded Percent of map unit: 5 percent Landform: Recessionial moraines, ground moraines, water-lain moraines Landform position (two-dimensional): Summit, shoulder, Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise Down-slope shape: Linear, convex Across-slope shape: Convex, linear

Ecological site: F111XA009IN - Till Ridge

Ecological site: F111XA008IN - Wet Till Ridge

Treaty, drained Percent of map unit: 2 percent Landform: Swales, water-lain moraines, depressions Landform position (two-dimensional): Footslope, toeslope Landform position (three-dimensional): Base slope, dip Down-slope shape: Linear Across-slope shape: Concave Ecological site: F111XA007IN - Till Depression Flatwood Br — Brookston silty clay loam, 0 to 2 percent slopes

Map Unit Setting National map unit symbol: 2t98n Elevation: 600 to 1,260 feet Mean annual precipitation: 37 to 46 inches Mean annual air temperature: 48 to 55 degrees F Frost-free period: 145 to 180 days Farmland classification: Prime farmland if drained

> Map Unit Composition Brookston and similar soils: 95 percent Minor components: 5 percent

Description of Brookston

Landform: Depressions, till plains Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Dip Down-slope shape: Concave, linear Across-slope shape: Concave Parent material: Loess over loamy till

Typical profile Ap - 0 to 16 inches: silty clay loam Btg1 - 16 to 32 inches: silty clay loam Btg2 - 32 to 44 inches: loam C - 44 to 60 inches: loam

Properties and qualities Slope: 0 to 2 percent Depth to restrictive feature: More than 80 inches Drainage class: Poorly drained Runoff class: Negligible Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr) Depth to water table: About 0 to 12 inches Frequency of flooding: None

Frequency of ponding: Frequent Calcium carbonate, maximum content: 40 percent Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 8.9 inches) Maximum salinity: Nonsaline to very slightly saline (0.0 to

Interpretive groups Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2w Hydrologic Soil Group: B/D Ecological site: F111XA007IN - Till Depression Flatwood Hydric soil rating: Yes

Minor Components Percent of map unit: 5 percent Landform: Till plains Landform position (two-dimensional): Summit, footslope Landform position (three-dimensional): Talf Down-slope shape: Concave Across-slope shape: Linear Ecological site: F111XA008IN — Wet Till Ridge

Hydric soil rating: No



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EROSION CONTROL MEASURES AND SCHEDULE:

- CONTRACTOR SHALL INSTALL ALL REQUIRED SILT FENCES SILT TRAPS, TREE PROTECTION AND INLET PROTECTION FOR EXISTING INLETS PRIOR TO THE START OF ANY EARTH MOVING OR
- CONTRACTOR SHALL INSTALL A STONE CONSTRUCTION ENTRANCE OR SOME OTHER APPROVED ENTRANCE PRIOR TO THE START OF EARTHWORK AS NECESSARY TO PREVENT SOIL FROM BEING
- TRACKED OR WASHED ONTO EXISTING ROADWAYS. LAND ALTERATIONS WHICH STRIP THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION, WHENEVER POSSIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED. WHEN GRADING IS COMPLETED, INSTALL SILT TRAPS, SILT FENCES, SLOPE DRAINS, TEMPORARY DIVERSIONS AND OTHER RUNOFF CONTROL MEASURES AT APPROPRIATE LOCATIONS TO KEEP SEDIMENT
- CONTAINED ON SITE. ALL DISTURBED AREAS SHALL BE SEEDED AND STRAW MULCHED AS SHOWN ON THE PLANS IMMEDIATELY AFTER COMPLETION OF GROUND ACTIVITY. FOR LARGE PROJECTS, THIS SEEDING SHOULD BE COMPLETED IN PHASES AS THE DIFFERENT AREAS OF THE SITE ARE COMPLETED.
- PERMANENT AND FINAL VEGETATION OR STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED AS SOON AS PRACTICAL UNDER THE CIRCUMSTANCES.
- THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM DEPENDING UPON THE WEATHER. STABILIZATION OF UN-VEGETATED AREAS MUST BE INITIATED BY THE END OF THE SEVENTH DAY ALL STORM SEWER INLET PROTECTION DEVICES SHALL BE PUT

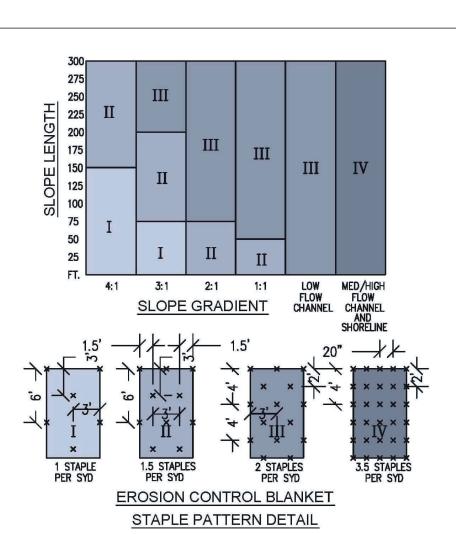
SHALL REMOVE AND DISPOSE OF THE TEMPORARY EROSION

CONTRACTOR SHALL MAINTAIN EROSION CONTROL MEASURES AND DEVICES DURING CONSTRUCTION AND UNTIL SILTATION OF THE STREETS AND STORM SEWERS WILL NO LONGER OCCUR. ONCE ONSITE EROSION AND SILTATION OF THE STREETS AND STORM SEWERS WILL NO LONGER OCCUR. THE CONTRACTOR

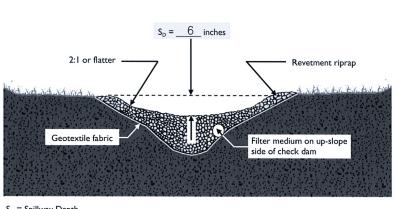
IN PLACE AT THE TIME EACH INLET IS CONSTRUCTED.

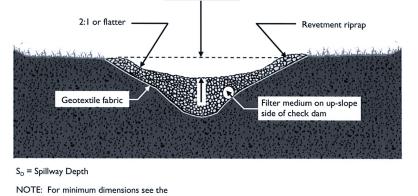
- CONTROL DEVICES. THESE GENERAL PROCEDURES MAY NOT COVER ALL SITUATIONS. REFER TO EROSION CONTROL PLANS FOR SPECIFIC NOTES AND ADDITIONAL DETAILS.
- 11. EROSION CONTROL IS TO COMPLY WITH IDEM CONSTRUCTION GENERAL PERMIT, AND INDIANA HANDBOOK FOR EROSION CONTROL IN DEVELOPING AREAS.
- THE AUTHORITY HAVING JURISDICTION HAS THE AUTHORITY TO REQUEST ADDITIONAL EROSION CONTROL MEASURES OR AMEND EROSION CONTROL PLANS SUBJECT TO ACTUAL SITE CONDITIONS

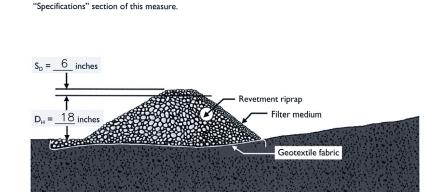
THERE ARE NO AREAS ON SITE WHERE STORMWATER MAY ENTER



B = Toe of Dam

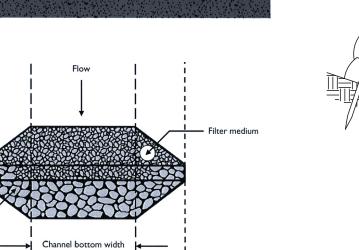


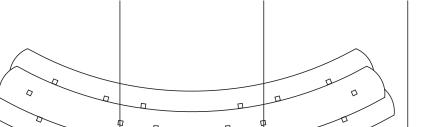


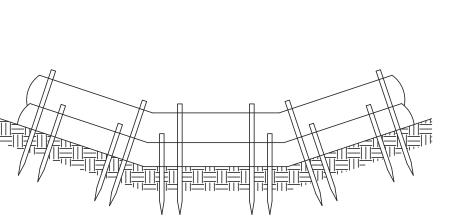


— Channel top width ———

S_D = Spillway Depth







THE FIBER CHECK DAM. INSTALL FIBER CHECK DAM PERPENDICULAR TO DIRECTION OF FLOW IN A HORSESHOE SHAPE IN THE DITCH WITH THE "U" FACING UPSTREAM. CONFORM FIBER CHECK DAM TO DITCH CONTOUR WITH NO GAPS FOR ITS ENTIRE LENGTH. PLACE WATTLE IN TRENCH AND ANCHOR WITH STAKES PER MANUFACTURE RECOMMENDATIONS. 4. WHEN JOINING TWO WATTLES, TIGHTLY ABUT BOTH ENDS OR OVERLAP THE WATTLES APPROXIMATELY SIX INCHES. IF WATTLES ARE JOINED TOGETHER BY ABUTTING THE ENDS, TIE THE ENDS TOGETHER USING HEAVY TWINE OR PLASTIC LOCKING TIES. BACKFILL WITH THE EXCAVATED SOIL AGAINST WATTLE ON UP-SLOPE SIDE. COMPACT FILL TO KEEP WATTLE IN PLACE. INSTALL UNTIL SEEDING HAS BEEN ESTABLISHED. REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, DISLODGE OR SLUMPING WATTLES

BEFORE FIBER CHECK DAM INSTALLATION, A SECTION OF GEOTEXTILE

OR OTHER EROSION CONTROL BLANKET MUST BE INSTALL UNDERNEATH

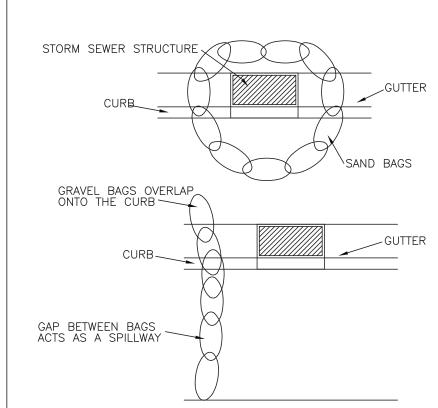
IF WATER FLOWS AROUND WATTLE AN CREATES EROSION, FILL AND COMPACT CUTS, EXTEND WITH ADDITIONAL WATTLES WITH SLIGHT UPHILL REMOVE SEDIMENT THAT ACCUMULATES BEHIND THE FIBER CHECK DAM WHEN IT REACHES HALF THE HEIGHT OF THE DEVICE.

INLET PROTECTION:

- 1. FILL GEOTEXTILE BAGS APPROXIMATELY HALF FULL WITH 2 TO 3 INCH STONE OR GRAVEL
- 2. AT A POSITION DOWNSLOPE OF THE LOT AND UPSLOPE OF THE INLET, LAY BAGS TIGHTLY IN A ROW CURVING UPSLOPE FROM CURB AND AWAY
- 3. OVERLAP BAGS ONTO THE CURB AND EXTEND A MINIMUM OF 3 FEET INTO THE STREET. 4. FOR ADDITIONAL LAYERS, OVERLAP BAGS WITH THE
- ROW BENEATH, AND LEAVE A ONE-BAG GAP IN THE MIDDLE OF THE TOP ROW TO SERVE AS A
- 5. PLACE BAGS IN AN ARC AROUND CURB INLETS THAT ARE IN A SUMP POSITION. 6. SET UP SAFETY / TRAFFIC BARRIERS TO KEEP

VEHICLES FROM HITTING BAGS, CAUSING POSSIBLE

7. INSPECT AND REPAIR AS NEEDED, AND REMOVE ANY ACCUMULATED SEDIMENTS AFTER EVERY STORM.



STAKES SPACED

COMPACT EXCAVATED SOIL ON UPSLOPE SIDE

SET 9" DIA. WATTLE IN

OF WATTLE UPSLOPE SO THAT BASE OF WATTLE ENDS TERMINATE AT A HIGHER

REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, DISLODGE OR SLUMPING WATTLES.

IF WATER FLOWS AROUND WATTLE AN CREATES EROSION, FILL AND COMPACT CUTS,

PLACE WATTLE IN TRENCH AND ANCHOR WITH STAKES PER MANUFACTURE

TIE THE ENDS TOGETHER USING HEAVY TWINE OR PLASTIC LOCKING TIES.

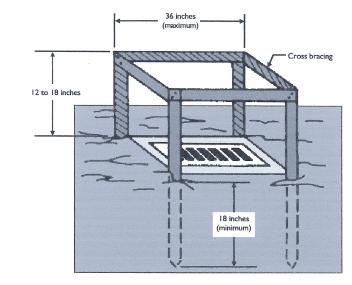
ELEVATION THAN TOP OF WATTLE AT ITS LOWEST POINT.

EXTEND WITH ADDITIONAL WATTLES WITH SLIGHT UPHILL GRADE.

INSTALL UNTIL SEEDING HAS BEEN ESTABLISHED.

9" WIDE X 3" DEEP TRENCH

FILL TO KEEP WATTLE IN PLACE.



(REFERENCE PAGE 254 OF THE INDIANA STORM WATER QUALITY MANUAL)

1. DIG AN EIGHT-INCH DEEP, FOUR-INCH WIDE TRENCH AROUND THE PERIMETER OF THE INLET.

2. IF USING PRE-ASSEMBLED GEOTEXTILE FABRIC AND

- POSTS, DRIVE THE POSTS INTO THE SOIL, TIGHTLY STRETCHING THE GEOTEXTILE FABRIC BETWEEN POSTS AS EACH IS DRIVEN. (POSTS MUST BE PLACED ON THE INLET SIDE OF THE ANCHOR TRENCH WITH THE GEOTEXTILE FABRIC ON THE SIDE OF THE TRENCH FARTHEST FROM THE INLET.) NOTE: IF ASSEMBLING THE GEOTEXTILE FABRIC AND POSTS ON-SITE, DRIVE THE POSTS INTO THE SOIL AND THEN SECURE THE GEOTEXTILE FABRIC TO THE POSTS BY PLACING A PIECE OF LATHE OVER THE FABRIC AND FASTENING IT TO THE POST (STRETCHING THE FABRIC
- 3. USE THE WRAP JOINT METHOD WHEN JOINING POSTS (SEE SILT FENCE ON PAGE 215 INDIANA STORM WATER QUALITY MANUAL).
- 4. PLACE THE BOTTOM 12 INCHES OF GEOTEXTILE FABRIC INTO THE FIGHT-INCH DEEP TRENCH, LAYING THE REMAINING FOUR INCHES IN THE BOTTOM OF THE TRENCH AND EXTENDING AWAY FROM THE INLET. 5. BACKFILL THE TRENCH WITH SOIL MATERIAL AND

BETWEEN POSTS AS IT IS FASTENED).

COMPACT IT IN PLACE. 6. BRACE THE POSTS BY NAILING BRACES INTO EACH CORNER POST OR UTILIZE RIGID PANELS TO SUPPORT

1. SET POSTS AND

TRENCH UPSLOPE

ALONG THE LINE OF

ATTACH THE

FILTER FABRIC

FENCING AND

THE TRENCH

EXTEND IT INTO

FI EXCAVATE A 8"X4"

THE POSTS.

NOTE: FILTER FABRIC MUST BE NON-WOVEN FILTER FABRIC. (REFERENCE PAGE 156 OF THE INDIANA STORM WATER QUALITY MANUAL)

STAPLE

FENCING TO

EACH POST

THE WIRE MESH

THE TRENCH

THE EXCAVATED

AND COMPAC

SOIL.

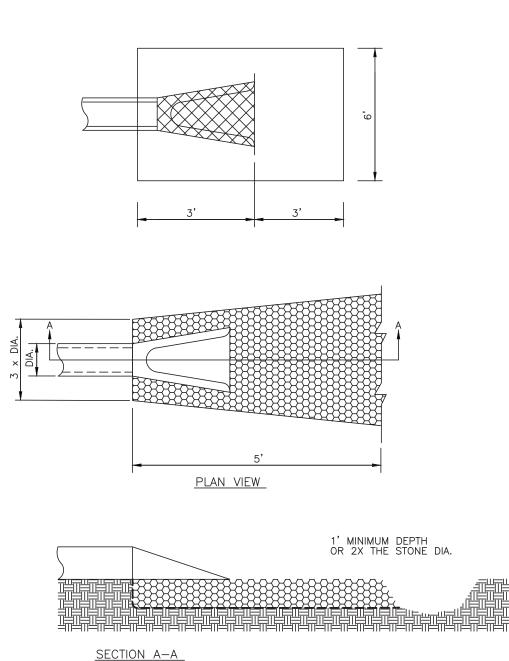
STABILIZATION PRACTICE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	ост.	NOV.	D
PERMANENT SEEDING		A-			*////	///\//			* // /►			
DORMANT SEEDING	B									B		
TEMPORARY SEEDING		C-	E	A	*	//////						
SODDING		F	**		*	//////	//\///	/////*-	-			
MULCHING	G											

- LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 20 LBS/ACRE FERTILIZE AS RECOMMENDED BY SOIL TEST. IF TESTING IS NOT DONE, APPLY 400-600 LBS./ACRE OF 12-12-12 ANALYSIS, OR EQUIVALENT, FERTILIZER.
- B = KENTUCKY BLUEGRASS 120 LBS/ACRE; CREEPING RED FESCUE 120 LBS/ACRE: PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 30 LBS/ACRE FERTILIZE AS RECOMMENDED BY SOIL TEST. IF TESTING IS NOT DONE, APPLY 400-600 LBS./ACRE OF 12-12-12 ANALYSIS, OR
- = SPRING OATS 3 BUSHELS/ACRE FERTILIZE AS RECOMMENDED BY SOIL TEST. IF TESTING IS NOT DONE, APPLY 400-600 LBS./ACRE OF 12-12-12 ANALYSIS, OR EQUIVALENT, FERTILIZER.
- = WHEAT OR RYE 2 BUSHELS/ACRE FERTILIZE AS RECOMMENDED BY SOIL TEST. IF TESTING IS NOT DONE, APPLY 400-600 LBS./ACRE OF 12-12-12 ANALYSIS, OR EQUIVALENT, FERTILIZER. E = ANNUAL RYEGRASS 40 LBS/ACRE (1 LB/1000 SQ. FT.) FERTILIZE AS RECOMMENDED BY SOIL TEST. IF TESTING IS NOT DONE, APPLY 400-600 LBS./ACRE OF 12-12-12 ANALYSIS, OR EQUIVALENT, FERTILIZER. F = SOD
- G = STRAW MULCH 2 TONS/ACRE
- * /I/ * = IRRIGATION NEEDED DURING JUNE, JULY, AUGUST AND/OR

** = IRRIGATION NEEDED FOR 2 WEEKS AFTER SUPPLYING SOD

SEEDBED PREPARATION:

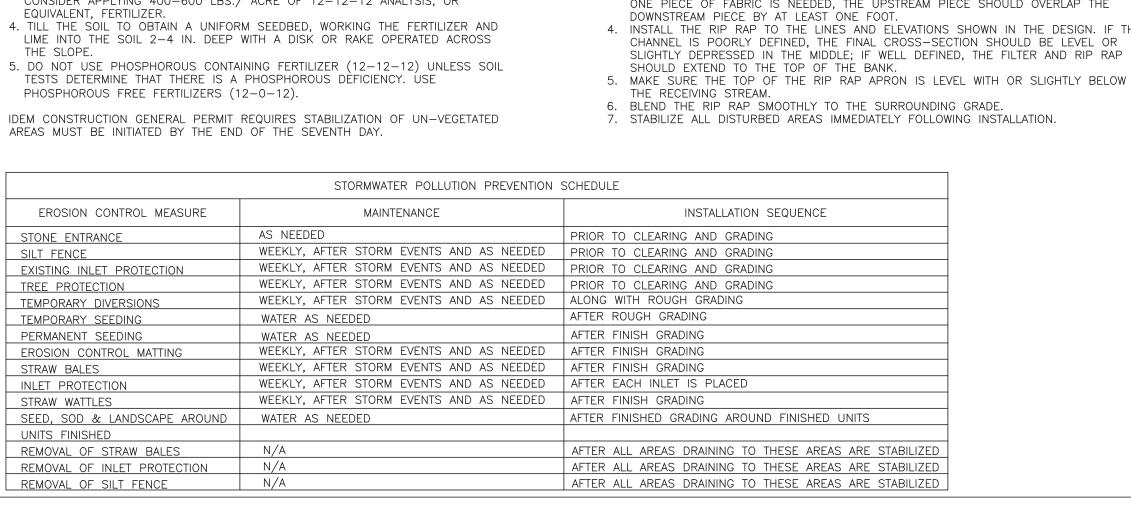
- . TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS. (CONTACT YOUR COUNTY SWCD OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE AND SOILS INFORMATION, INCLUDING AVAILABLE TESTING SERVICES.) 2. IF SOIL PH IS UNSUITABLE FOR THE SPECIES TO BE SEEDED, APPLY LIME
- ACCORDING TO TEST RECOMMENDATIONS. 3. FERTILIZE AS RECOMMENDED BY THE SOIL TEST. IF TESTING IS NOT DONE, CONSIDER APPLYING 400-600 LBS./ ACRE OF 12-12-12 ANALYSIS, OR EQUIVALENT, FERTILIZER.
- TESTS DETERMINE THAT THERE IS A PHOSPHOROUS DEFICIENCY. ÚSE
- PHOSPHOROUS FREE FERTILIZERS (12-0-12).

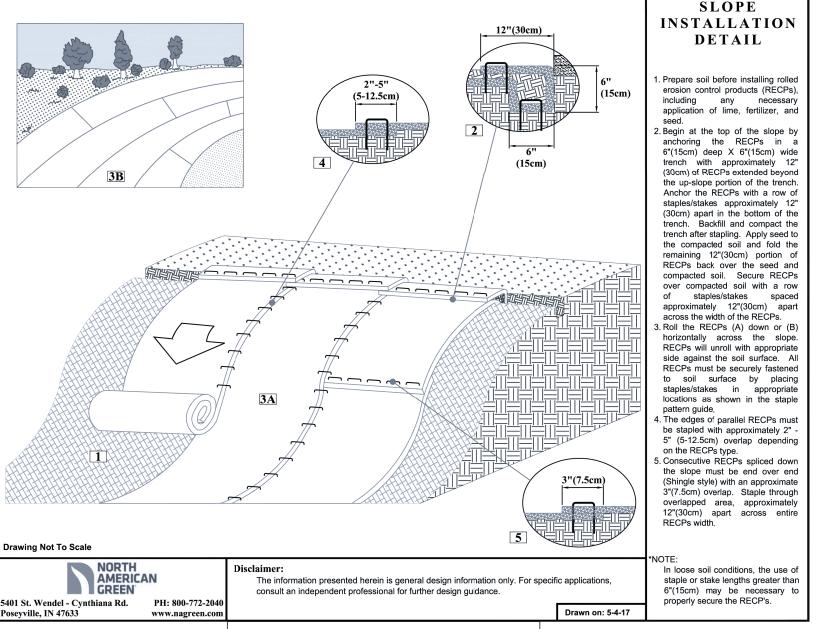


1. EXCAVATE THE APRON AREA SUBGRADE BELOW DESIGN ELEVATION TO ALLOW FOR THICKNESS OF THE FILTER FABRIC AND RIPRAP. 2. COMPACT ANY FILL USED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING

EROSION CONTROL @ ENDSECTION - OUTLET

- UNDISTURBED MATERIAL, AND SMOOTH ENOUGH TO PROTECT FABRIC FROM TEARING. 3. PLACE THE FABRIC ON THE COMPACTED AND SMOOTHED FOUNDATION. IF MORE THAN ONE PIECE OF FABRIC IS NEEDED, THE UPSTREAM PIECE SHOULD OVERLAP THE DOWNSTREAM PIECE BY AT LEAST ONE FOOT. 4. INSTALL THE RIP RAP TO THE LINES AND ELEVATIONS SHOWN IN THE DESIGN. IF THE CHANNEL IS POORLY DEFINED, THE FINAL CROSS-SECTION SHOULD BE LEVEL OR
- 5. MAKE SURE THE TOP OF THE RIP RAP APRON IS LEVEL WITH OR SLIGHTLY BELOW
- 6. BLEND THE RIP RAP SMOOTHLY TO THE SURROUNDING GRADE.
- 7. STABILIZE ALL DISTURBED AREAS IMMEDIATELY FOLLOWING INSTALLATION.





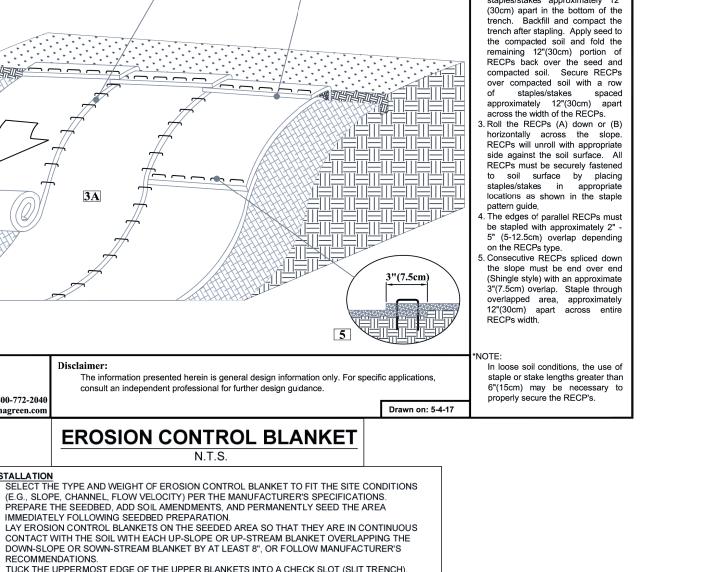
EROSION CONTROL BLANKET

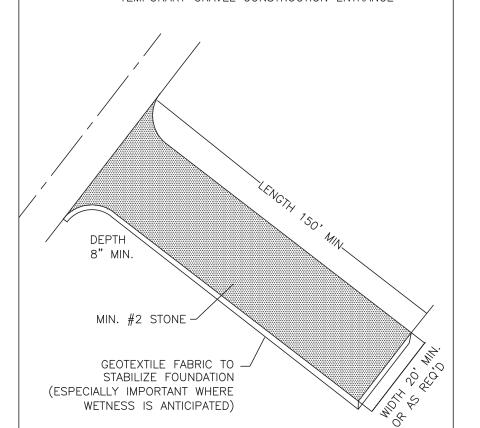
- INSTALLATION

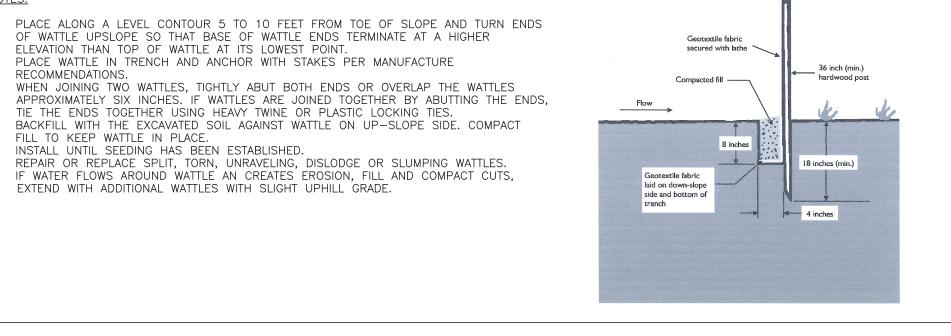
 1. SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (E.G., SLOPE, CHANNEL, FLOW VELOCITY) PER THE MANUFACTURER'S SPECIFICATIONS. PREPARE THE SEEDBED, ADD SOIL AMENDMENTS, AND PERMANENTLY SEED THE AREA IMMEDIATELY FOLLOWING SEEDBED PREPARATION. LAY EROSION CONTROL BLANKETS ON THE SEEDED AREA SO THAT THEY ARE IN CONTINUOUS
- DOWN-SLOPE OR SOWN-STREAM BLANKET BY AT LEAST 8", OR FOLLOW MANUFACTURER'S TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN. IN CERTAIN APPLICATIONS, THE MANUFACTURER MAY REQUIRE ADDITIONAL CHECK SLOTS AT SPECIFIC LOCATIONS DOWN SLOPE FROM THE
- UPPERMOST EDGE OF THE UPPER BLANKET. ANCHOR THE BLANKETS IN PLACE BY DRIVING STAPLES, PINS, OR SPIKES THROUGH THE BLANKET AND INTO THE UNDERLYING SOIL. FOLLOW AN ANCHORING PATTERN APPROPRIATE FOR THE SITE CONDITIONS AND AS RECOMMENDED BY THE MANUFACTURER
- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE

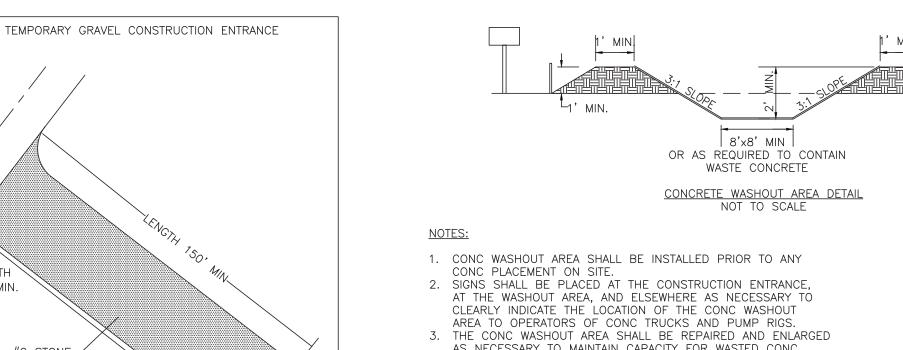
ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET

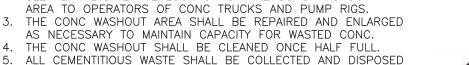
		STAPLE PATTERN GUIDE	
2"-5" (5-12.5 cm) 6' (1.8 m)	A — 2"-5" (5-12.5 cm) 3' (1 m) 0.7 staples per sq yd	B 2"-5" (5-12.5 cm) (5-12.5 cm) (5-12.5 cm) (5-12.5 cm) (5-12.5 cm) (1.8 m) (1	2"-5" (5-12.5 cm) (5-12.5 cm) (5-12.5 cm) (1.2 m) (0.5 m) (0.5 m)
2"-5" (5-12.5 cm)—6 4' (1.2 m)		2"-5" (5-12.5 cm) 3.33'(1m) 3.33'(1m) 3.75 staples per sq yd	4:1 slopes (A) 1:1 and steeper slopes (D) 3:1 slopes (B) Medium/high flow channel (D) 2:1 slopes (C) High flow channel and shoreline (E) NOTES: Use ECMDS for more accurate staple patternselection. The information presented herein is general design information only. For specific pagilications, consult an independent professional for further design guidance.











6. AT THE END OF CONSTRUCTION, ALL CONC IN WASHOUT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED WASTE SITE 7. WHEN THE CONC WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE INSPECTOR.



