

CITY OF WEST LAFAYETTE, INDIANA

DRAWINGS FOR

CUMBERLAND AVENUE SANITARY SEWER EXTENSION

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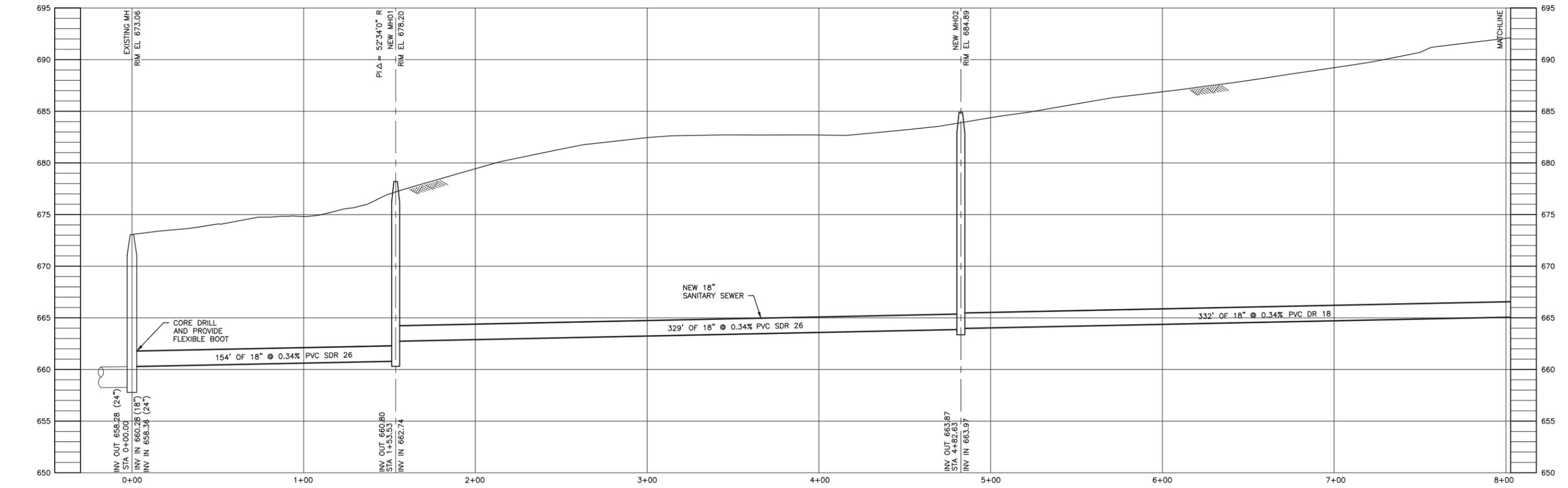
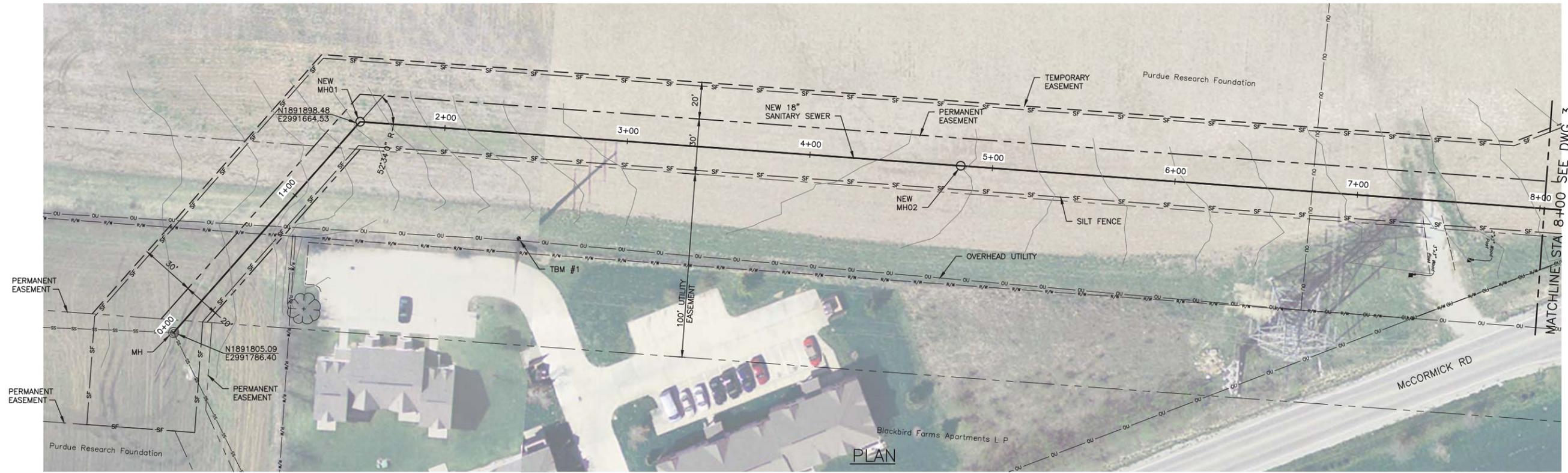
GREELEY AND HANSEN

7820 INNOVATION BOULEVARD, SUITE 150
INDIANAPOLIS, INDIANA 46278

MARCH 2014



FILE: J:\Projects\0791H.W.Laf.Cumberland.Ave.Sanitary.Sewer.Ext\21.CADD.Files\21.05.Working.Dwgs\0791HOG02-11.1:1.03/26/14.14:40.GH-H



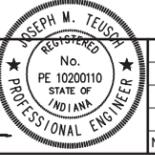
PROFILE

GREELEY AND HANSEN
 7820 INNOVATION BOULEVARD, SUITE 150
 INDIANAPOLIS, INDIANA 46278

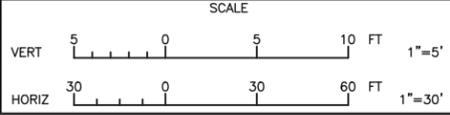
DESIGNED TSH
 DRAWN MJR
 CHECKED JMT

APPROVED SEAL AFFIXED
 MARCH 26, 2014

Joseph M. Teusnik



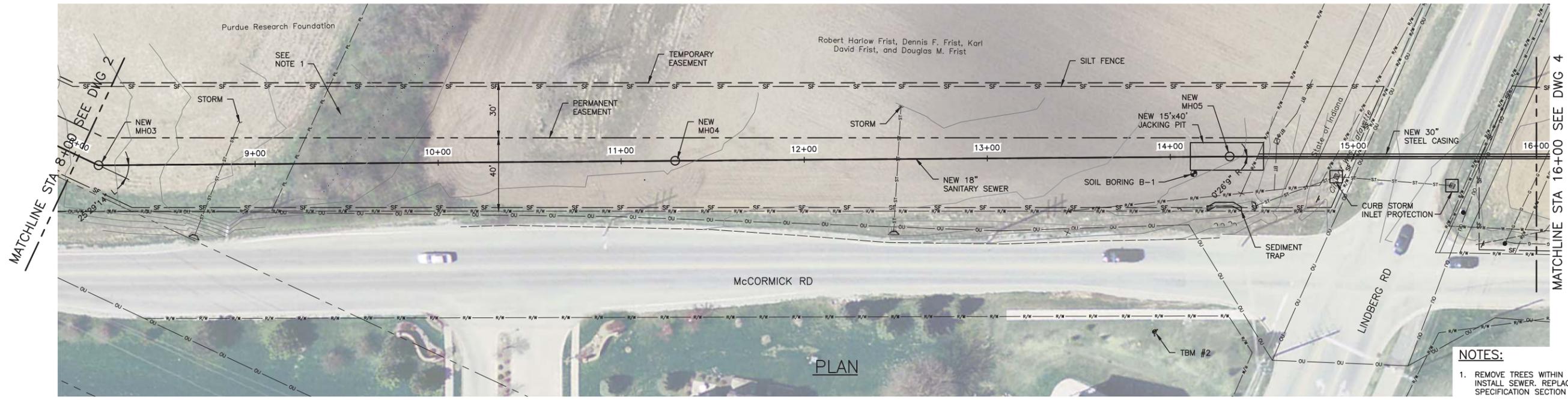
NO.	DATE	APPD	REVISION



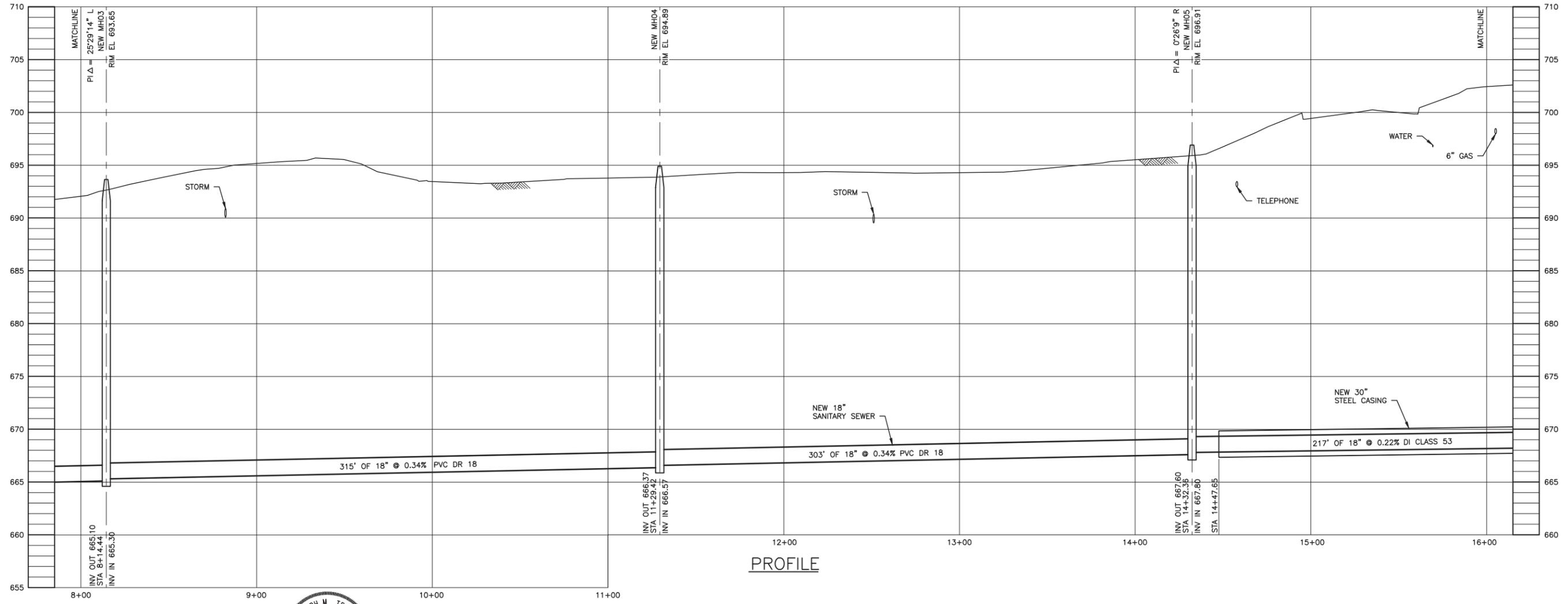
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 0+00 TO STA 8+00

FILE NAME	0791HOG02-11.DWG
DWG	2
SHEET	2 OF 16
DATE	MARCH 2014
REV	0



NOTES:
 1. REMOVE TREES WITHIN EASEMENT AS REQUIRED TO INSTALL SEWER. REPLACE TREES IN ACCORDANCE WITH SPECIFICATION SECTION 02900.



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 7820 INNOVATION BOULEVARD, SUITE 150
 INDIANAPOLIS, INDIANA 46278

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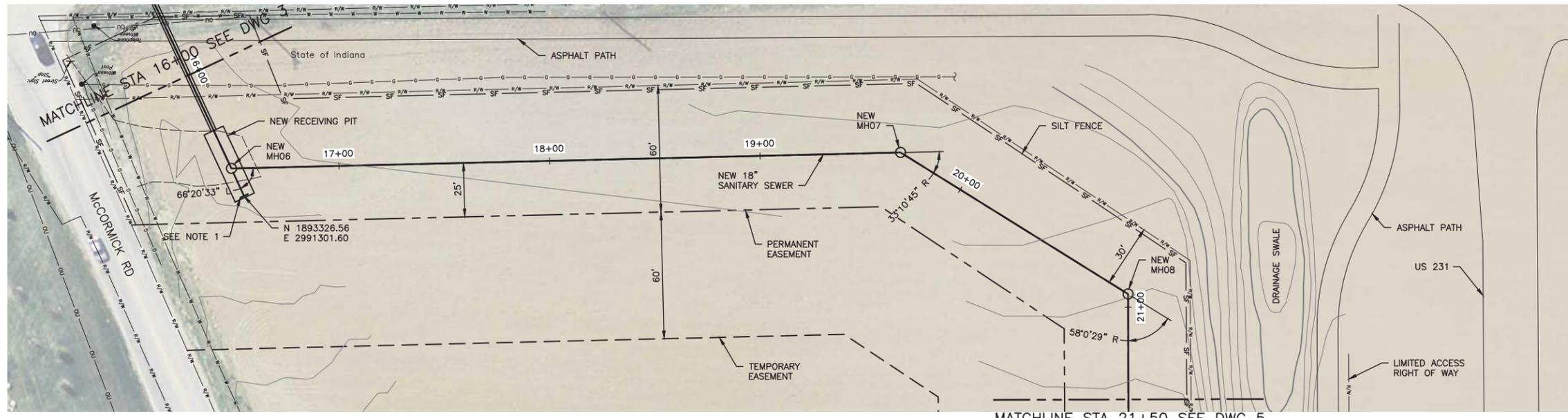
NO.	DATE	APPD	REVISION



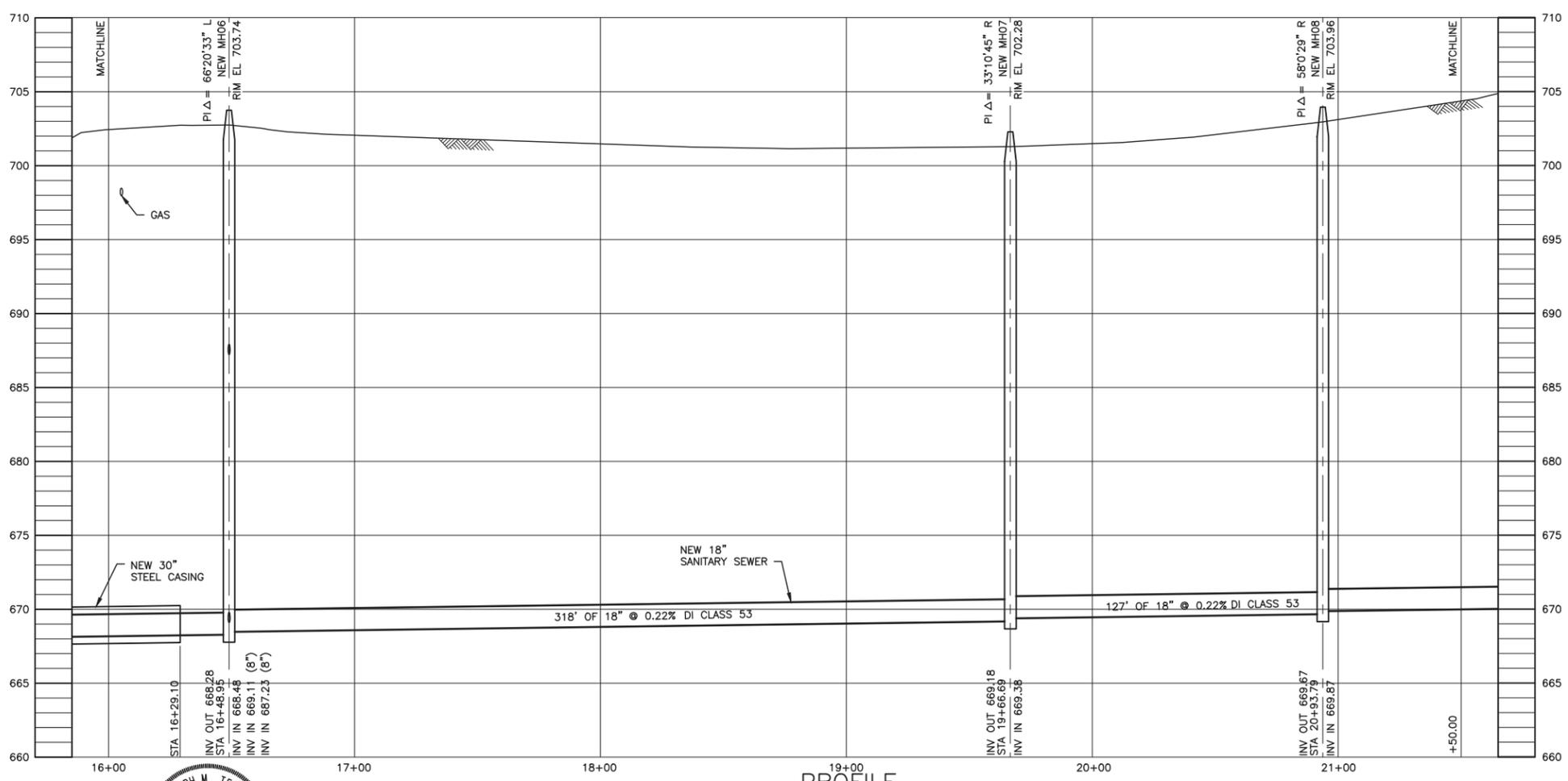
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 8+00 TO STA 16+00

FILE NAME	0791HOG02-11.DWG
DWG	3
SHEET	3 OF 16
DATE	MARCH 2014
REV	0



PLAN



PROFILE

NOTES:

1. 12' OF NEW 8" PVC SDR26 SANITARY SEWER FOR FUTURE CONNECTION AT 1.0% REQUIRED. PROVIDE MARKER POST AT END OF LATERAL.

FILE: J:\Projects\0791H W Laf Cumberland Ave Sanitary Sewer Ext\21 CADD Files\21.05 Working Dwg\0791H0G02-11 1:1 03/26/14 14:47 GH-H

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INDIANAPOLIS, INDIANA 46278

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NO.	DATE	APPD	REVISION

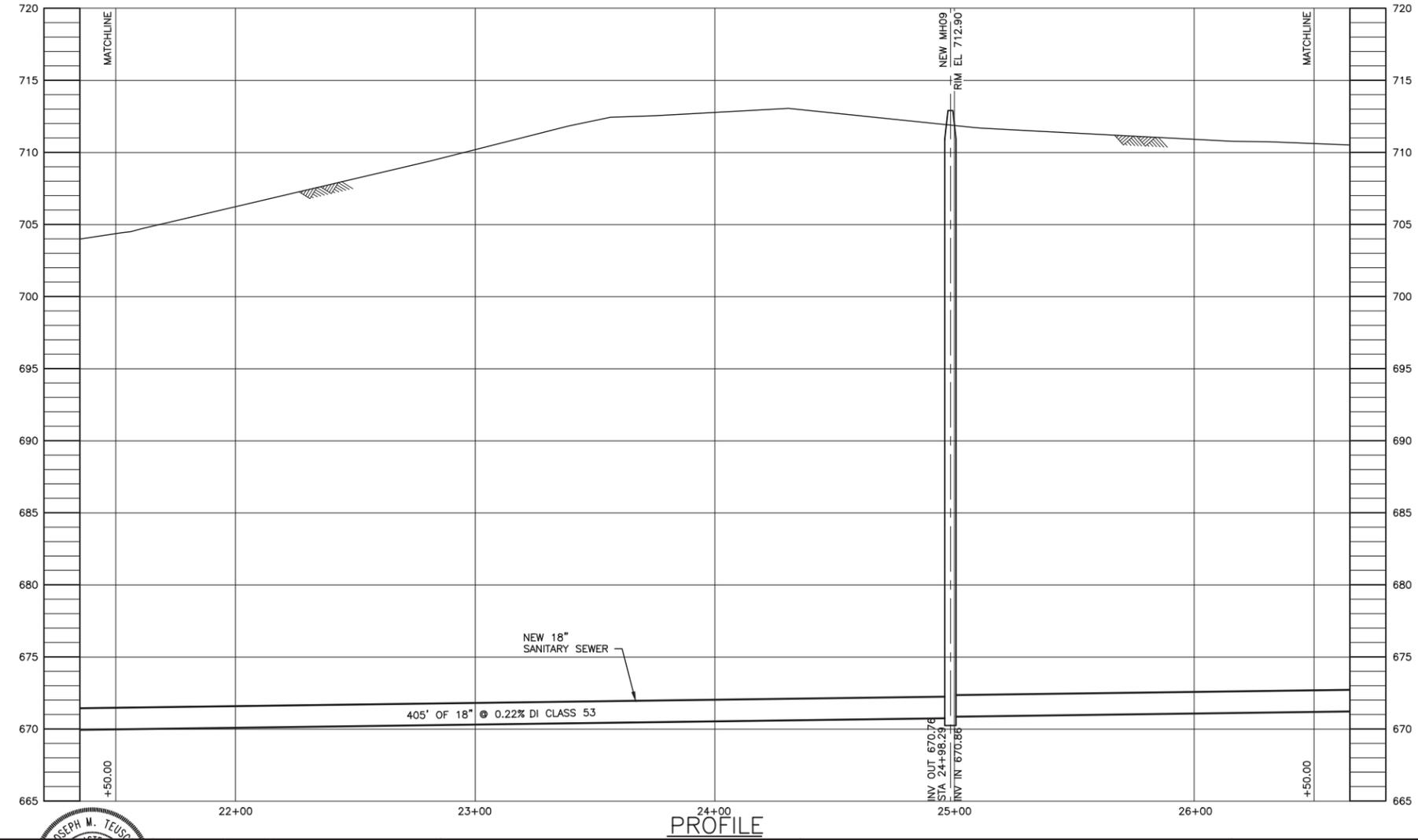
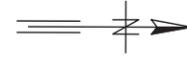
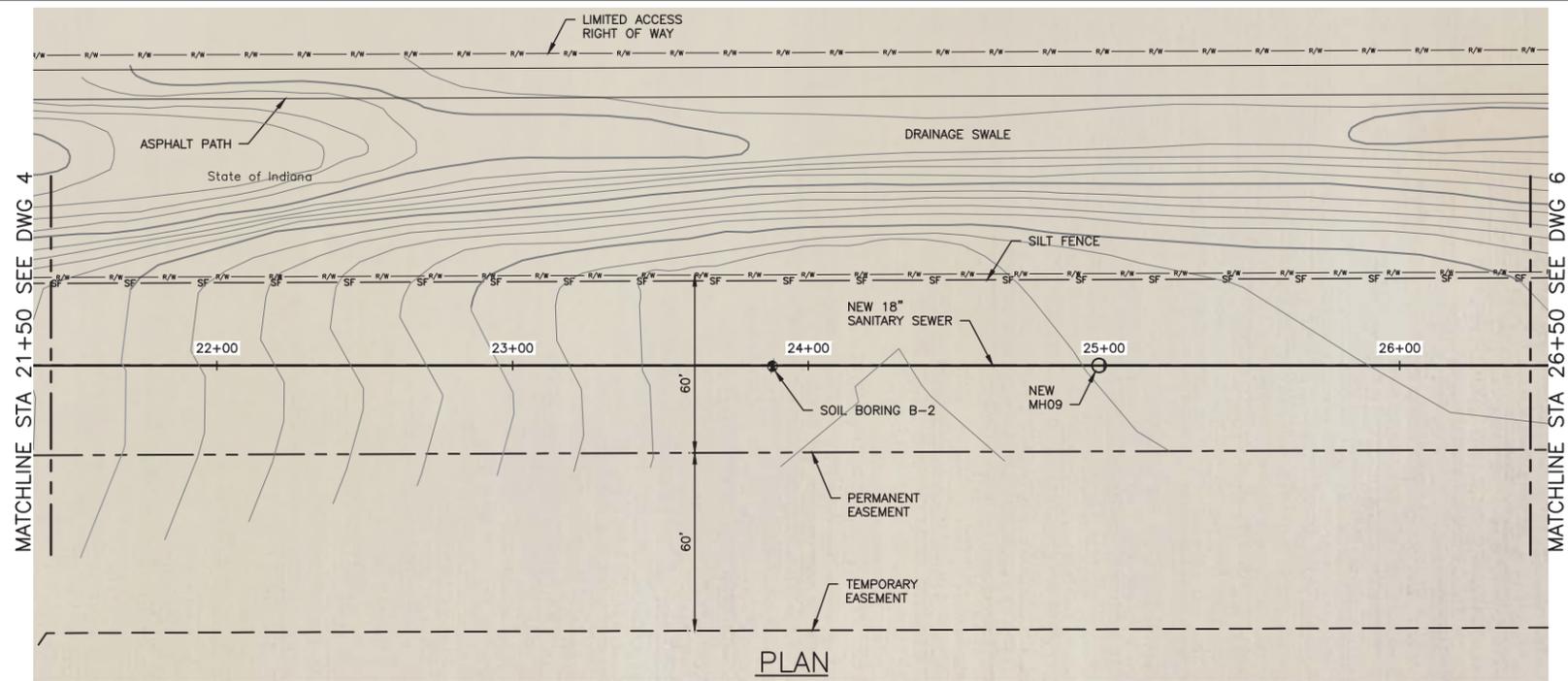


CITY OF WEST LAFAYETTE, INDIANA
CUMBERLAND AVENUE
SANITARY SEWER EXTENSION

GENERAL
PLAN AND PROFILE
GRAVITY SEWER
STA 16+00 TO STA 21+50

FILE NAME	0791H0G02-11.DWG
DWG	4
SHEET	4 OF 16
DATE	MARCH 2014
REV	0

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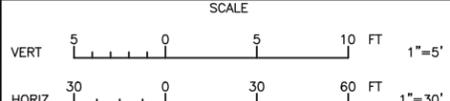
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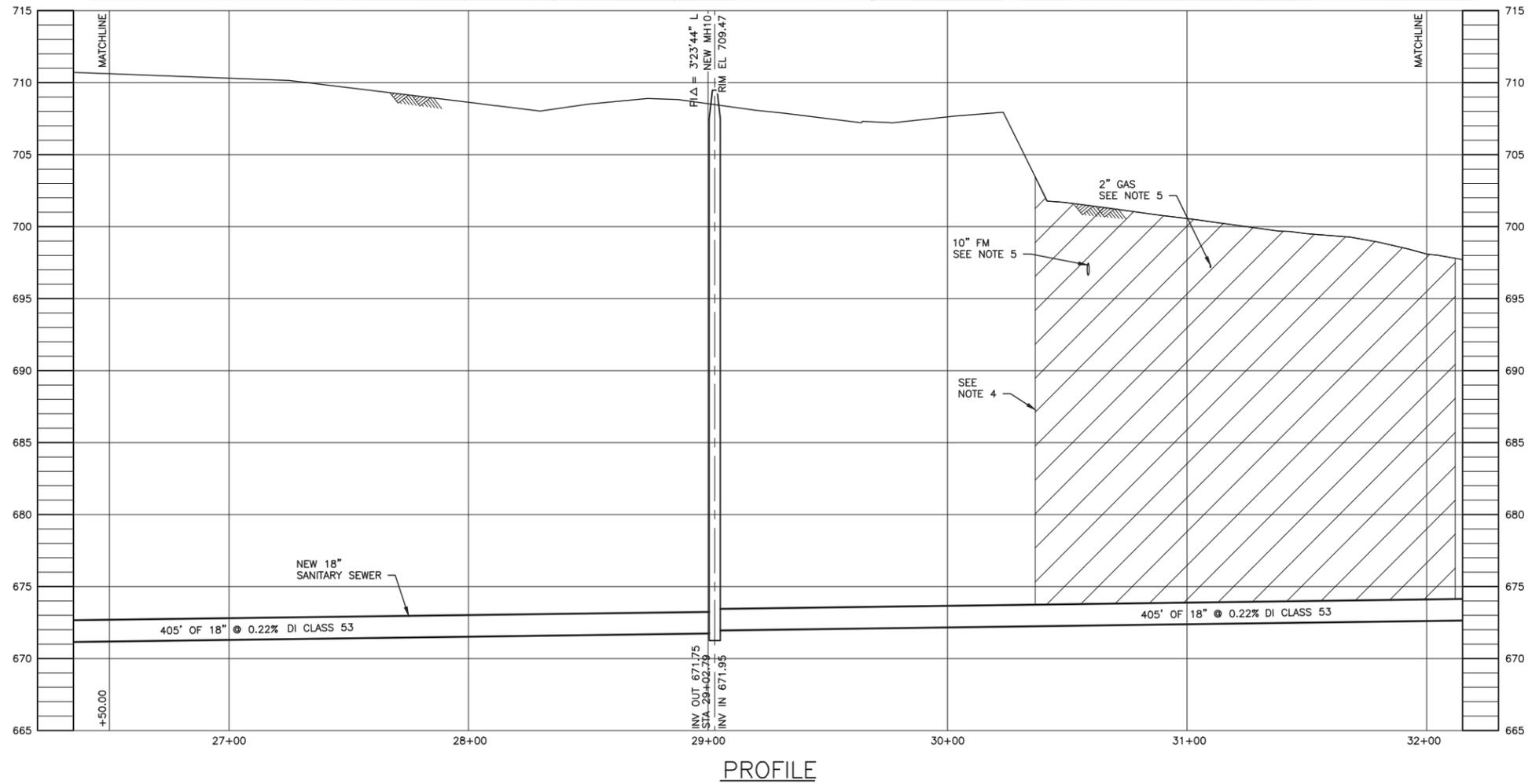
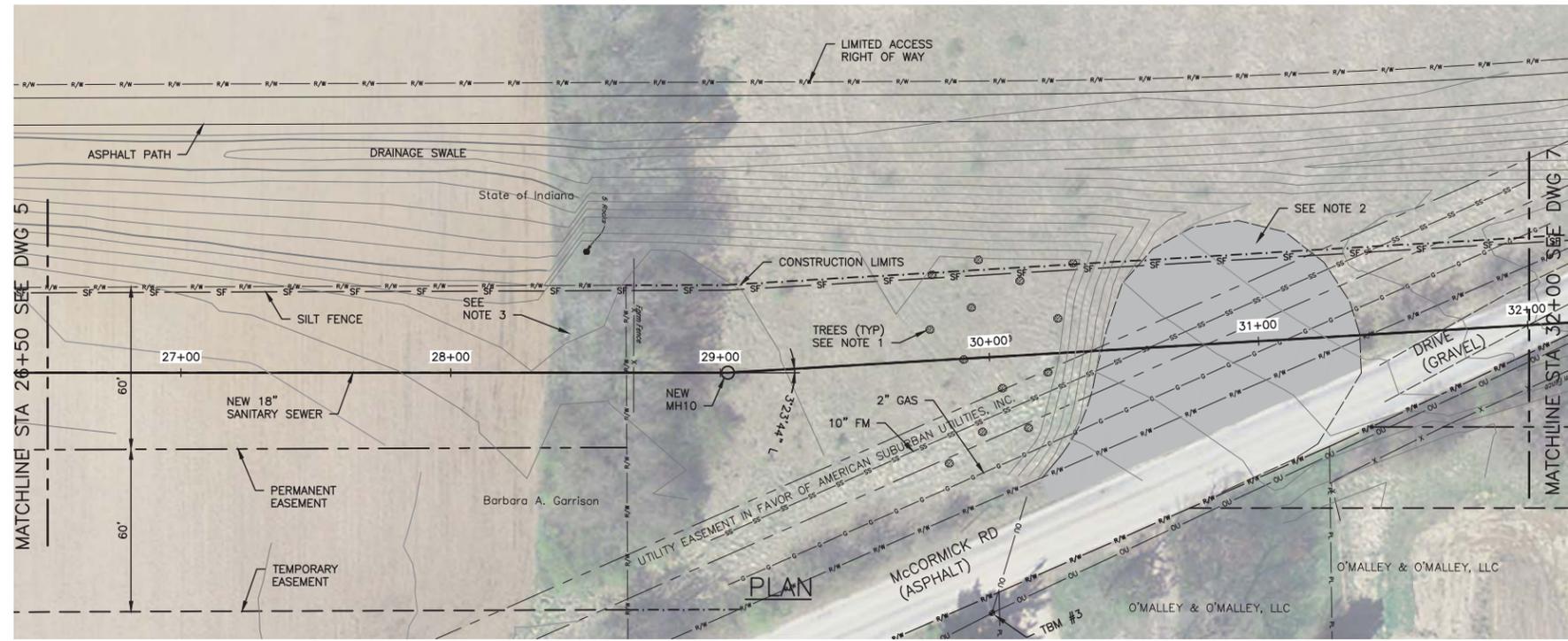
NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 21+50 TO STA 26+50

FILE NAME	0791H0G02-11.DWG		
DWG	5		
SHEET	5	OF	16
DATE	MARCH 2014	REV	0



- NOTES:**
1. ORNAMENTAL TREES TO BE REPLACED IN KIND.
 2. EXISTING ASPHALT ROADWAY. REPLACE DISTURBED AREAS PER ASPHALT PAVEMENT REPAIR DETAIL.
 3. REMOVE TREES WITHIN EASEMENT AS REQUIRED TO INSTALL SEWER. REPLACE TREES IN ACCORDANCE WITH SPECIFICATION SECTION 02230 AND 02900.
 4. BACKFILL PER TRENCH DETAIL UNDER IMPROVED AREAS.
 5. MAINTAIN UTILITIES IN SERVICE AT ALL TIMES.

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NO.	DATE	APPD	REVISION



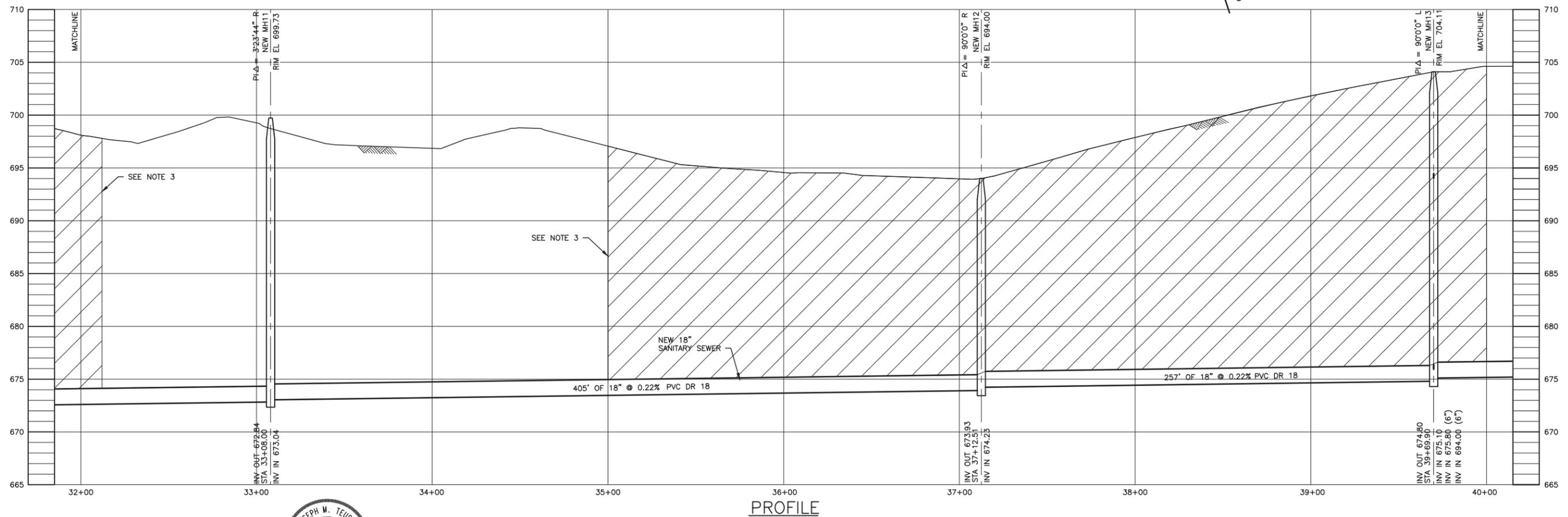
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 26+50 TO STA 32+00

FILE NAME	0791HOG02-11.DWG		
DWG	6		
SHEET	6	OF	16
DATE	MARCH 2014	REV	0



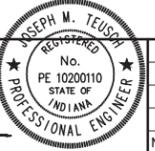
- NOTES:**
- 48" OF NEW 6" PVC SDR26 SANITARY SEWER FOR FUTURE CONNECTION AT 1.0% REQUIRED.
 - SEWER WITHIN OR ADJACENT TO FIELD ACCESS DRIVE (ROUGHLY STA 36+85 TO 40+00) TO BE BACKFILLED USING "TRENCH DETAIL UNDER IMPROVED AREAS" WITH GRANULAR MATERIAL BROUGHT TO GRADE IN PLACE OF PAVEMENT.
 - BACKFILL PER TRENCH DETAIL UNDER IMPROVED AREAS.



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 INDIANAPOLIS, INDIANA 46278

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Joseph James



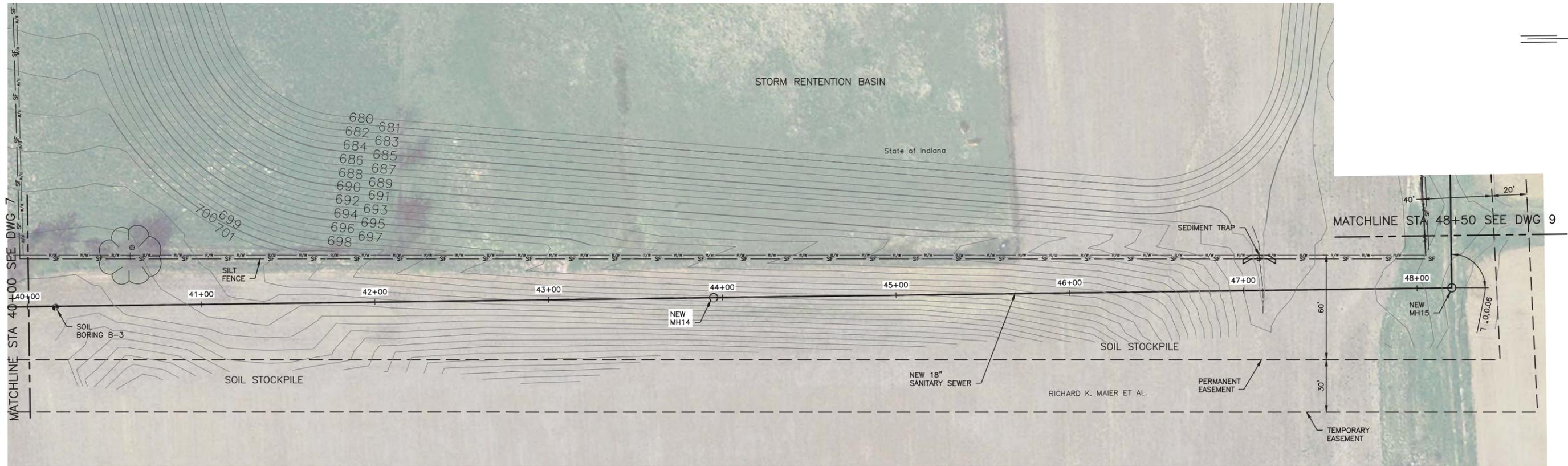
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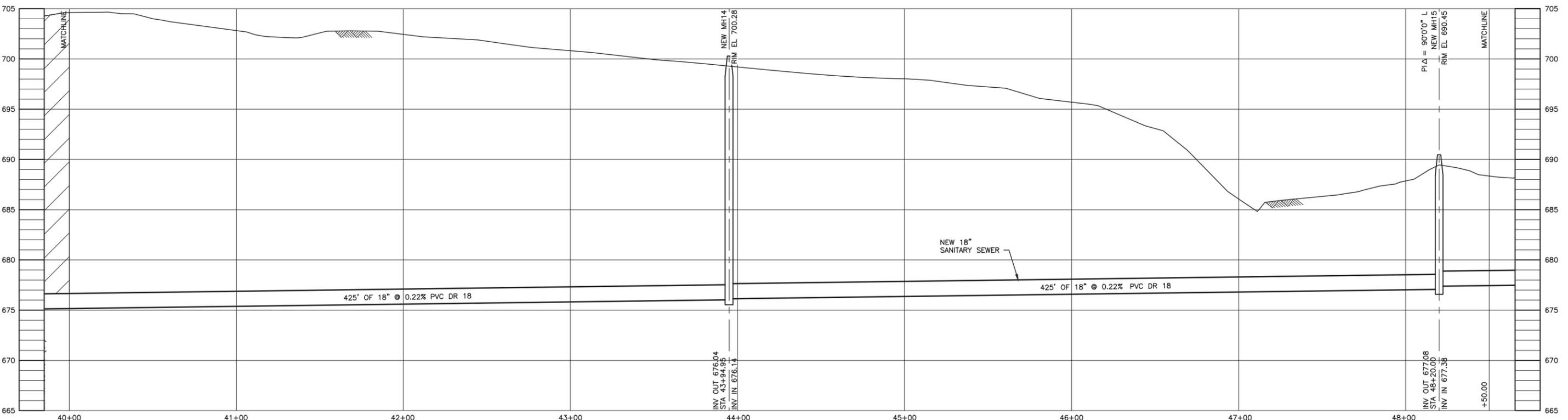
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL PLAN AND PROFILE
 GRAVITY SEWER
 STA 32+00 TO STA 40+00

FILE NAME	0791HOG02-11.DWG
DWG	7
SHEET	7 OF 16
DATE	MARCH 2014
REV	0



PLAN



PROFILE

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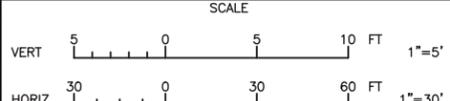
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 MARCH 26, 2014

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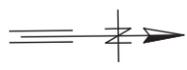
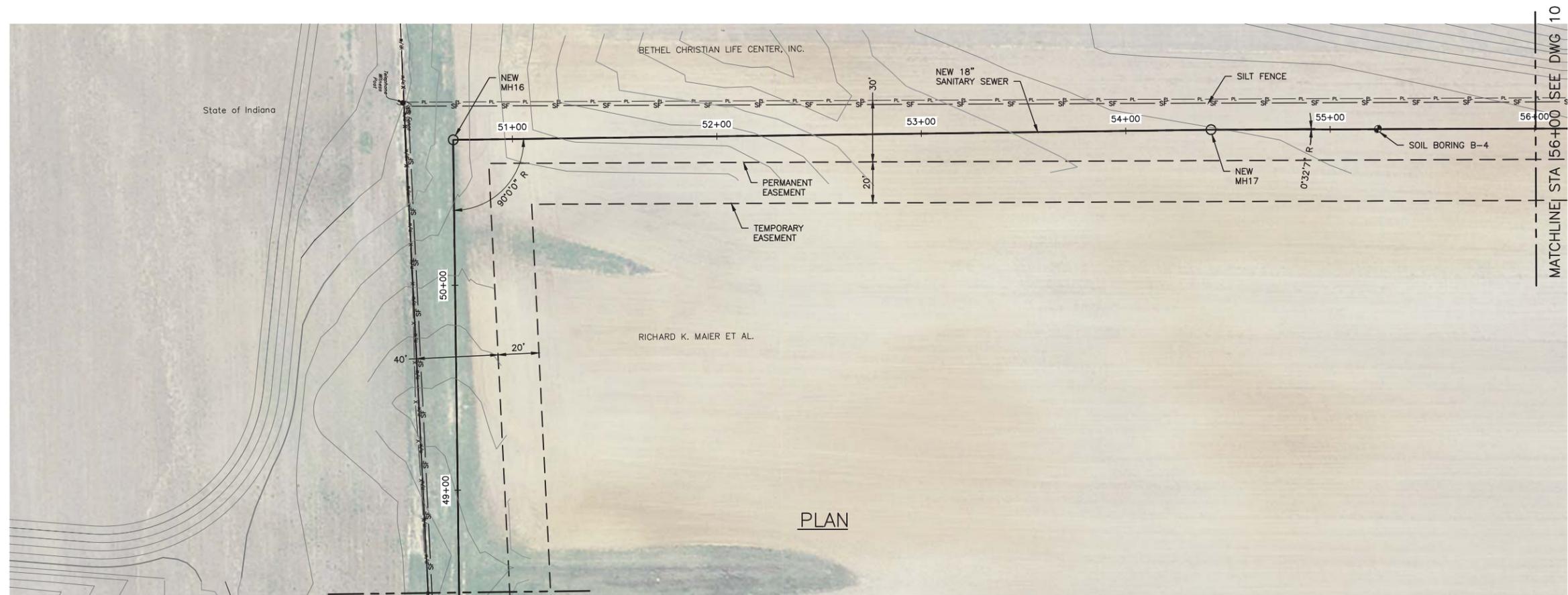
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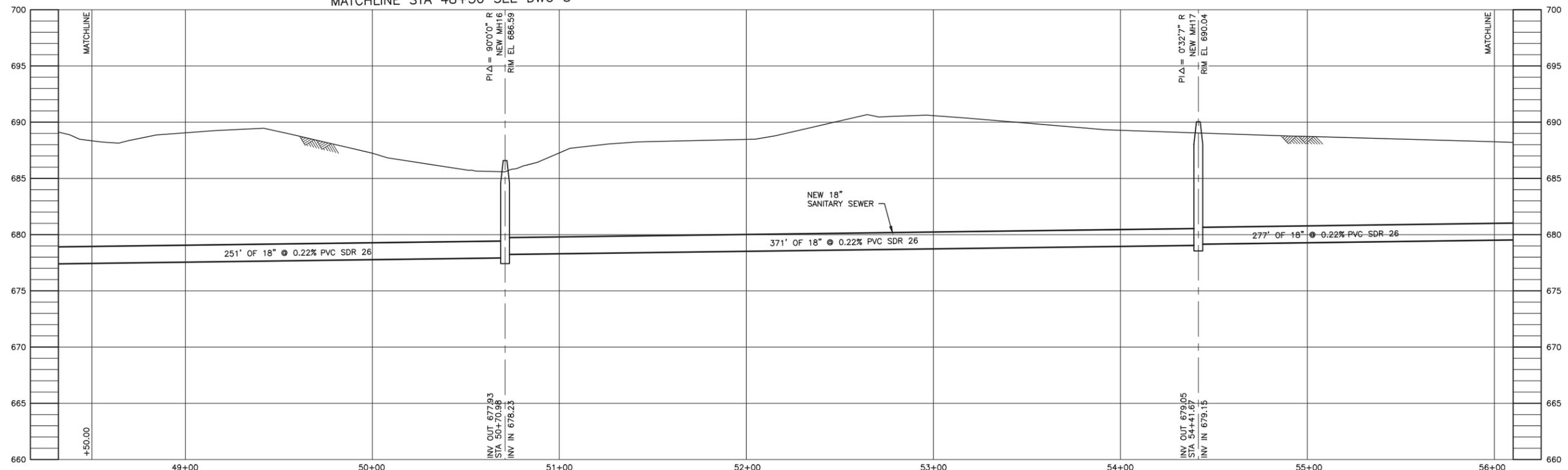
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 40+00 TO STA 48+50

FILE NAME	0791H0G02-11.DWG		
DWG	8		
SHEET	8	OF	16
DATE	MARCH 2014	REV	0



MATCHLINE STA 48+50 SEE DWG 8



PROFILE

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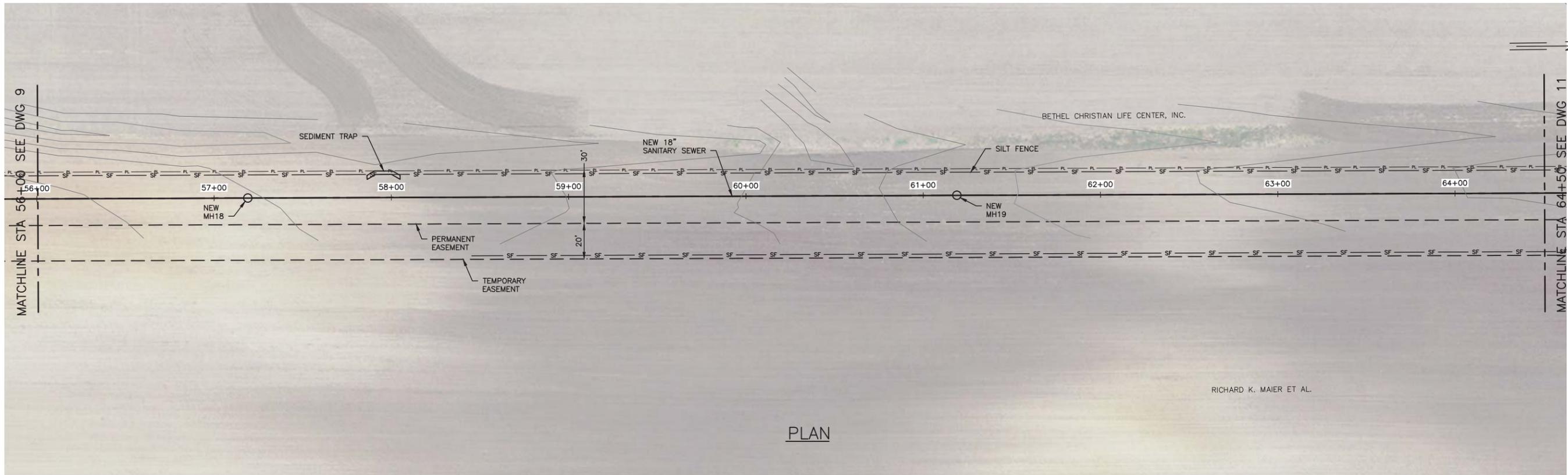
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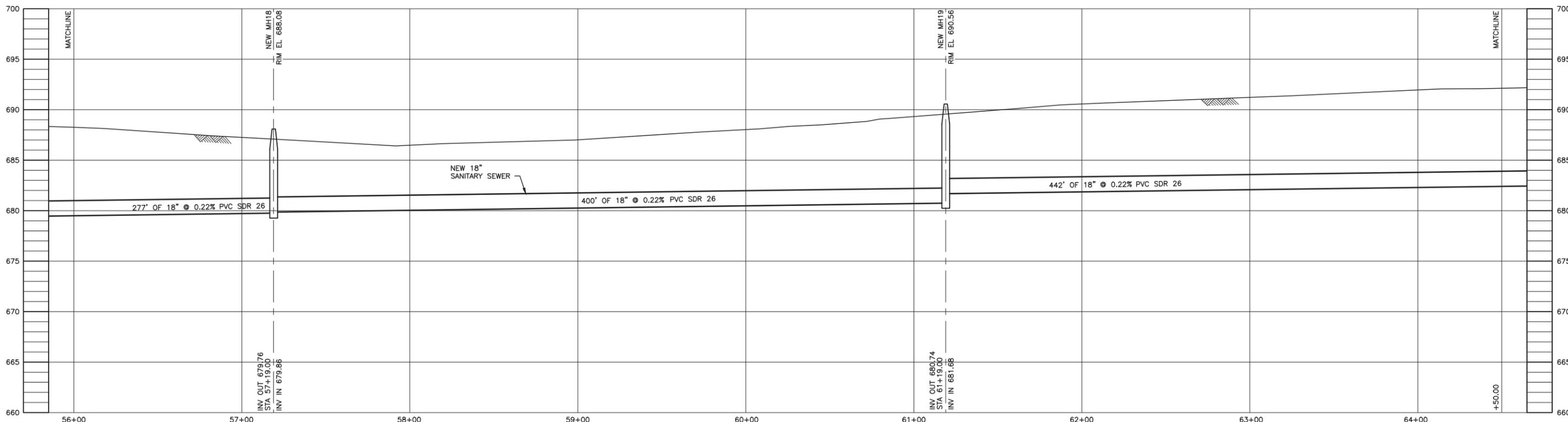
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 48+50 TO STA 56+00

FILE NAME	0791H0G02-11.DWG		
DWG	9		
SHEET	9	OF	16
DATE	MARCH 2014	REV	0



PLAN



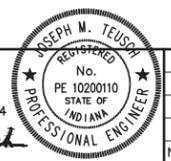
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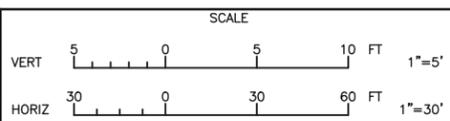
Greeley and Hansen
 7820 INNOVATION BOULEVARD, SUITE 150
 INDIANAPOLIS, INDIANA 46278

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 DRAWN MJR
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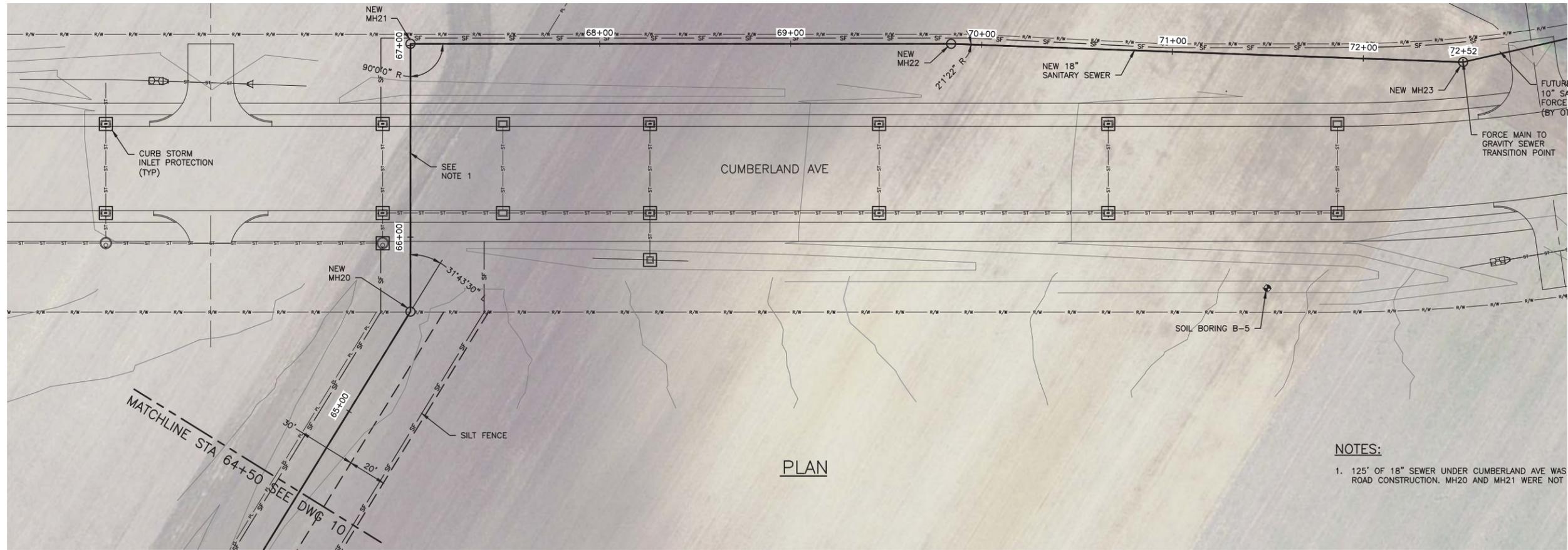
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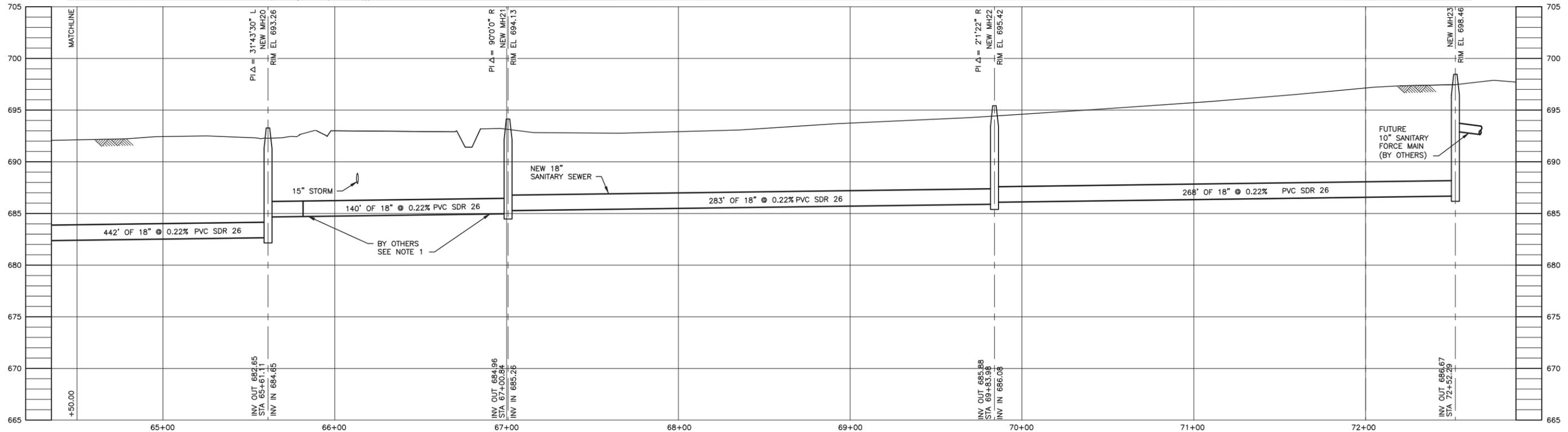
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 56+00 TO STA 64+50

FILE NAME	0791HOG02-11.DWG		
DWG	10		
SHEET	10	OF	16
DATE	MARCH 2014	REV	0



NOTES:
 1. 125' OF 18" SEWER UNDER CUMBERLAND AVE WAS INSTALLED PRIOR TO ROAD CONSTRUCTION. MH20 AND MH21 WERE NOT INSTALLED.



PROFILE

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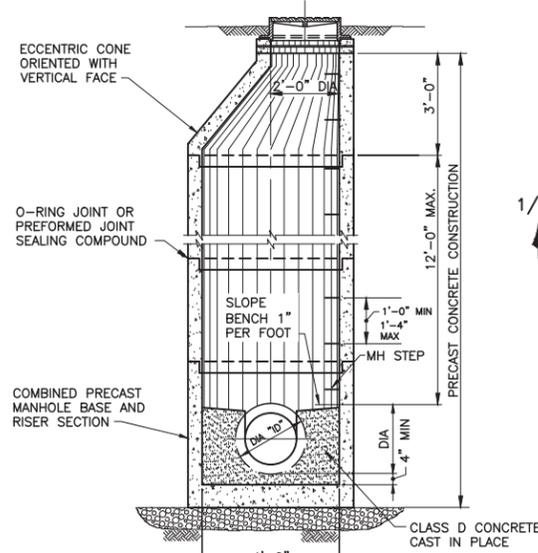
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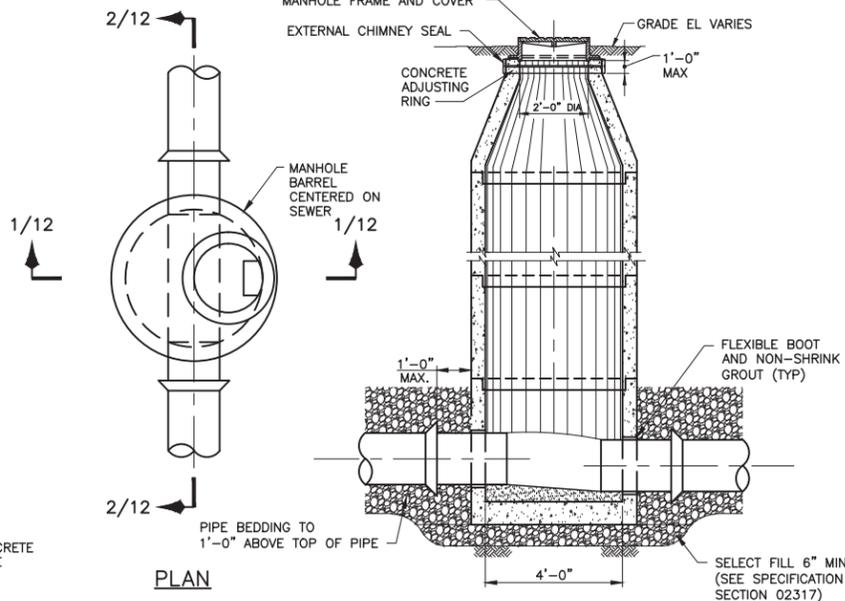
CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 PLAN AND PROFILE
 GRAVITY SEWER
 STA 64+50 TO STA 72+52

FILE NAME	0791HOG02-11.DWG		
DWG	11		
SHEET	11	OF	16
DATE	MARCH 2014	REV	0



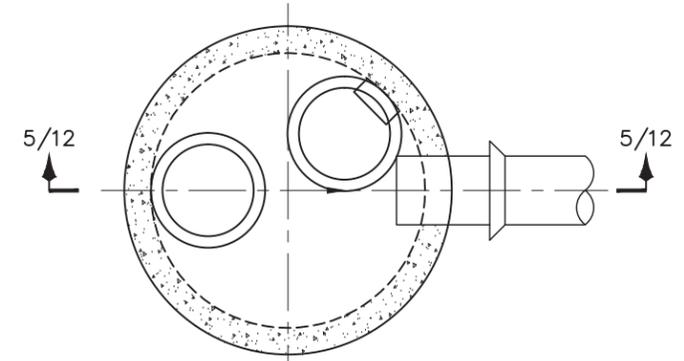
SECTION 1/12



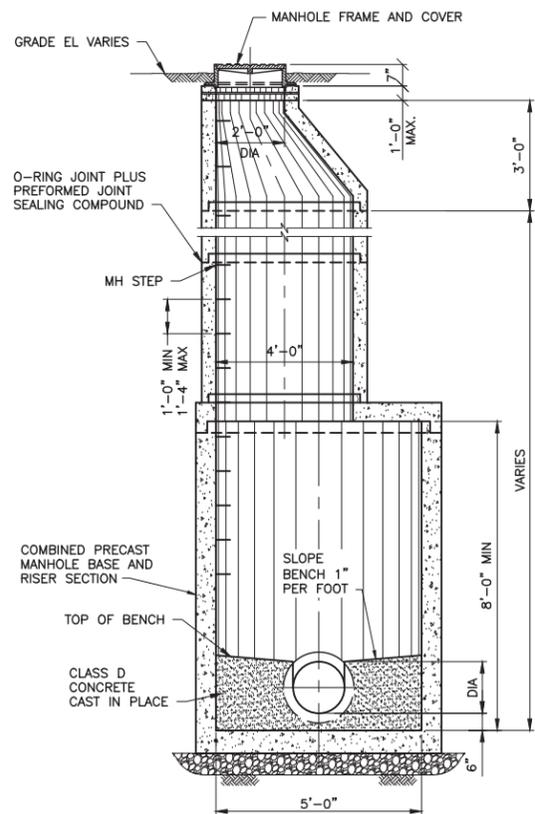
PLAN
STANDARD MANHOLE

SECTION 2/12

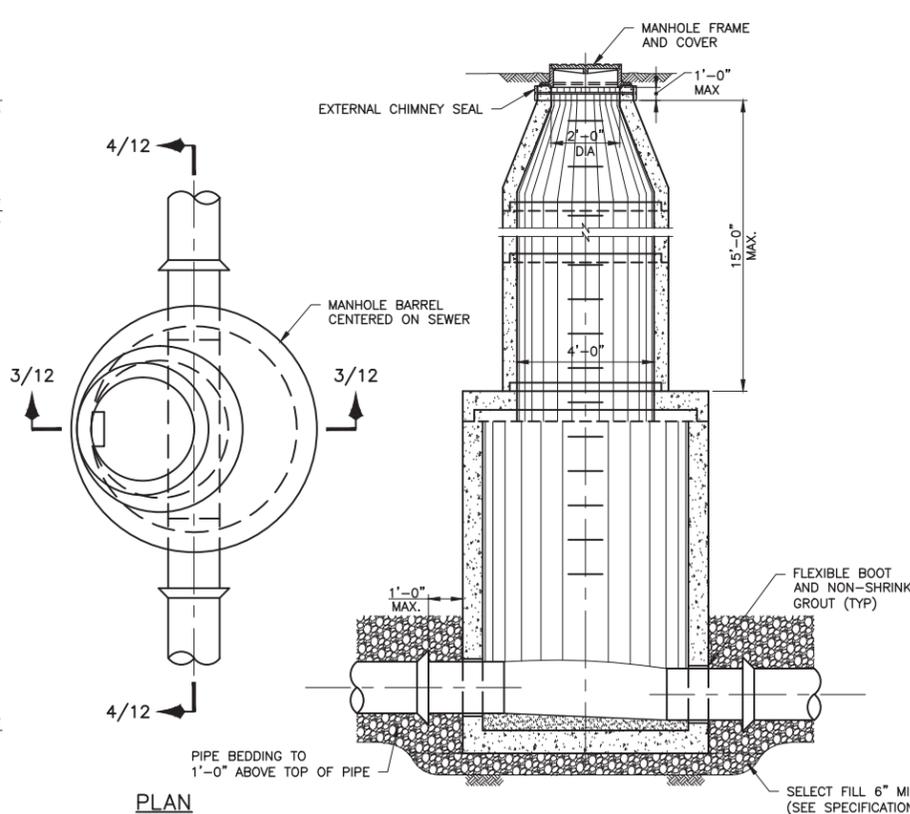
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SECTIONAL PLAN



SECTION 3/12



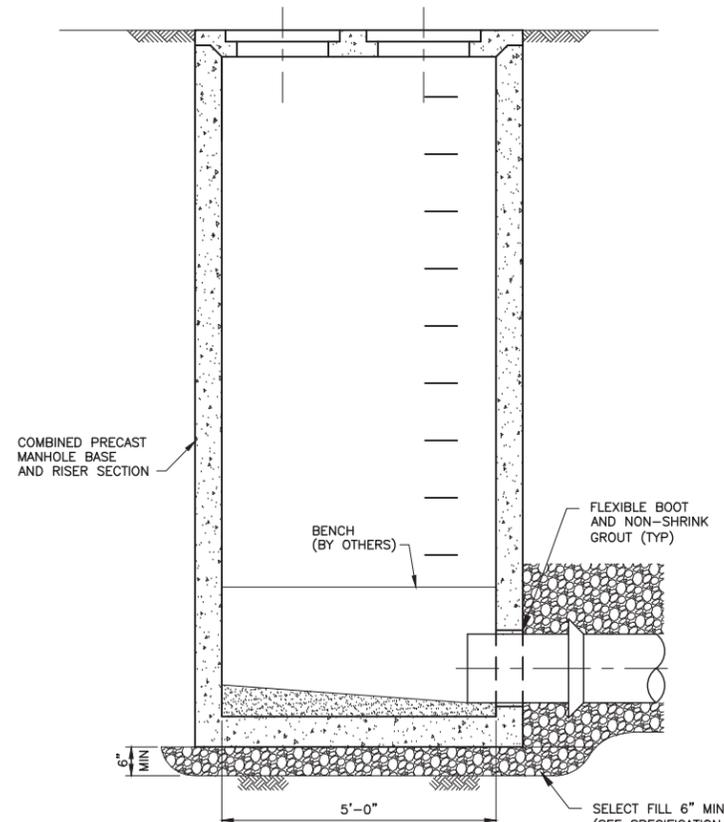
PLAN
SPECIAL MANHOLE

SECTION 4/12

SCALE: NOT TO SCALE

NOTE:

1. ALL MANHOLES TO BE PRECAST REINFORCED CONCRETE CONSTRUCTION.



SECTION 5/12

INSIDE DROP MANHOLE

SCALE: NOT TO SCALE

NOTES:

1. SEE SPECIFICATION SECTION 02509 FOR REQUIREMENTS.

FILE: J:\Projects\0791H.W.Laf.Cumberland.Ave.Sanitary.Sewer.Ext\21.CADD.Files\21.05.Working.Dwg\0791HOG12.1:1.03/26/14.11:26.GH-H

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INDIANAPOLIS, INDIANA 46278

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Joseph James



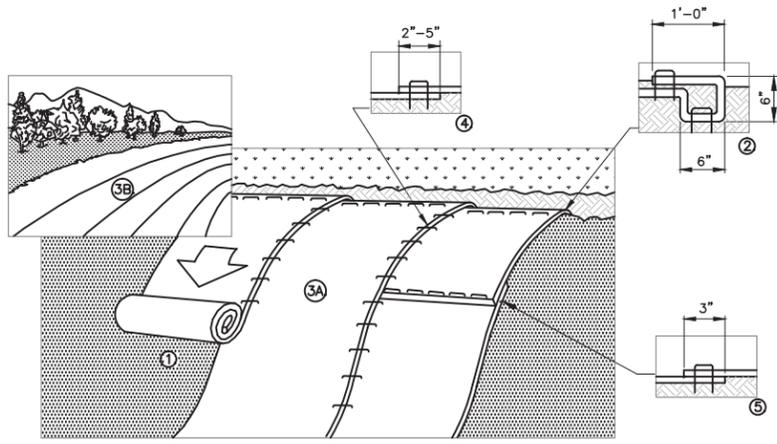
NO.	DATE	APPD	REVISION

SCALE
NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA
CUMBERLAND AVENUE
SANITARY SEWER EXTENSION

GENERAL
MANHOLE DETAILS

FILE NAME	0791HOG12.DWG
DWG	12
SHEET	12 OF 16
DATE	MARCH 2014
REV	0



INSTALLATION GUIDE:

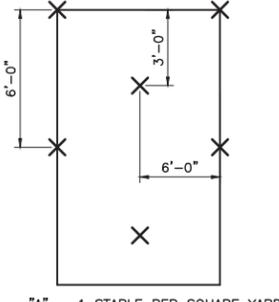
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

NOTES:

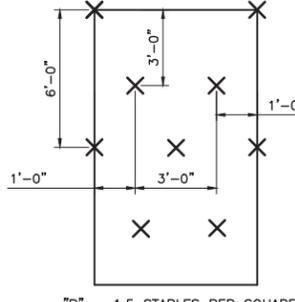
1. EROSION CONTROL MATS ARE INTENDED TO PREVENT EROSION AND HOLD SEED AND MULCH IN PLACE ON STEEP SLOPES AND IN CHANNELS SO THAT VEGETATION CAN BECOME WELL ESTABLISHED.
2. EROSION CONTROL MATS SHOULD BE USED:
 - A.) FOR PERMANENT STABILIZATION OF SLOPES 10 PERCENT OR GREATER AND WITH MORE THAN 10 FEET OF VERTICAL RELIEF.
 - B.) IN CONJUNCTION WITH SEED FOR FINAL STABILIZATION OF A SLOPE.
3. PROVIDE EROSION CONTROL MATS WHERE SHOWN AND AS REQUIRED FOR SLOPE PROTECTION AND RESTORATION.
4. EROSION CONTROL MATS SHALL BE AS WIDE AS NECESSARY TO PROTECT THE AREA DISTURBED BY CONSTRUCTION.
5. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

EROSION CONTROL MAT

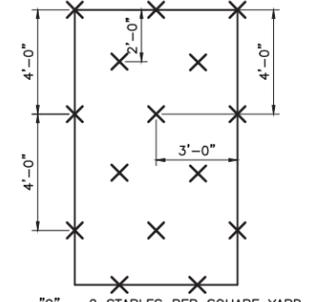
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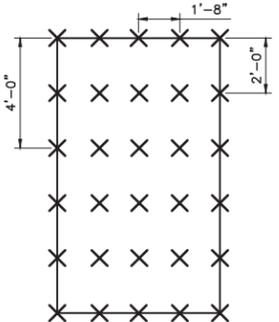
"A" - 1 STAPLE PER SQUARE YARD



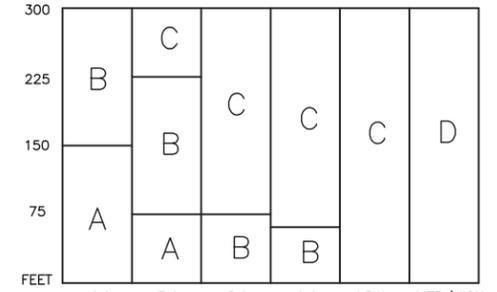
"B" - 1.5 STAPLES PER SQUARE YARD



"C" - 2 STAPLES PER SQUARE YARD



"D" - 3.5 STAPLES PER SQUARE YARD

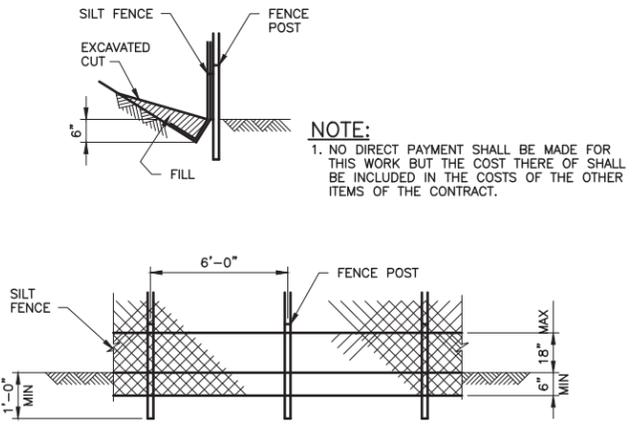


SLOPE LENGTH
FEET

LOW FLOW CHANNEL
MED/HIGH FLOW CHANNEL AND SHORELINE

EROSION CONTROL MAT - STAPLE GUIDE

SCALE: NOT TO SCALE



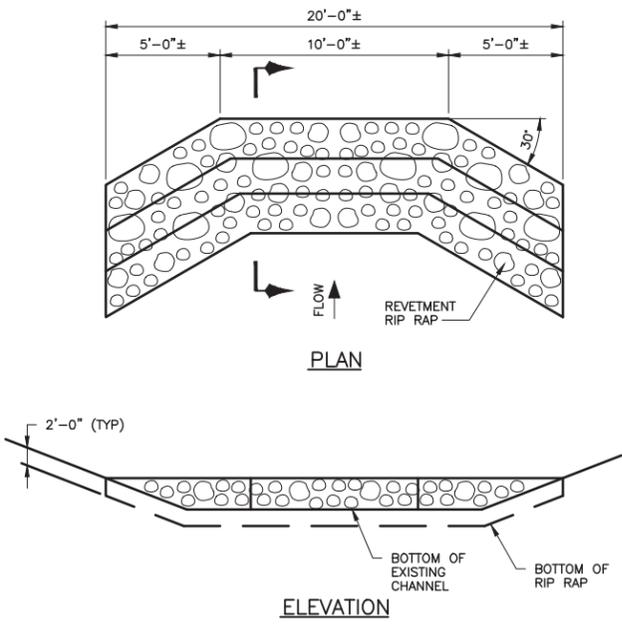
NOTE:

1. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

- INSTALLATION**
1. A 6" DEEP CUT IS MADE ALONG THE UPHILL SIDE OF THE PROPOSED SILT FENCE.
 2. 2" HARDWOOD OR STEEL FENCE POST ARE INSTALLED 6' APART (OR 8' IF SILT FENCE HAS WIRE BACKING).
 3. THE SILT FENCE IS UNROLLED ALONG THE FENCE LINE.
 4. ONE END OF THE BUILT-IN ATTACHMENT CORD WHICH RUNS THROUGH THE FULL LENGTH OF THE FENCE IS WRAPPED AROUND AND SECURED TO THE FIRST FENCE POST.
 5. THE FENCE IS PULLED TO THE NEXT POST AND A SMALL SLICE IS MADE IN THE HEM ABOVE THE CORD. THE CORD IS PARTIALLY PULLED OUT, PULLED TAUT AND WRAPPED TWICE AROUND THE POST.
 6. THE PROCESS IS REPEATED UNTIL THE LAST POST IS REACHED, AT WHICH POINT THE CORD IS SECURED.
 7. THE LOWER 8" OF THE FENCE IS LAYED UPHILL IN THE CUT AND BACKFILLED WITH SOIL.

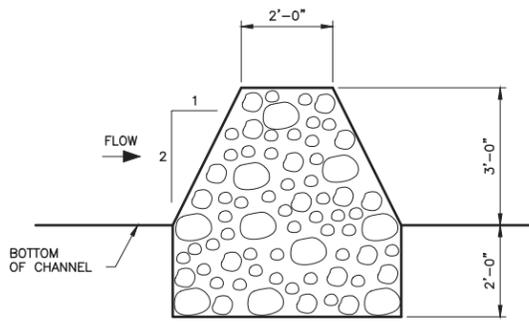
SILT FENCE DETAIL

SCALE: NOT TO SCALE



PLAN

ELEVATION



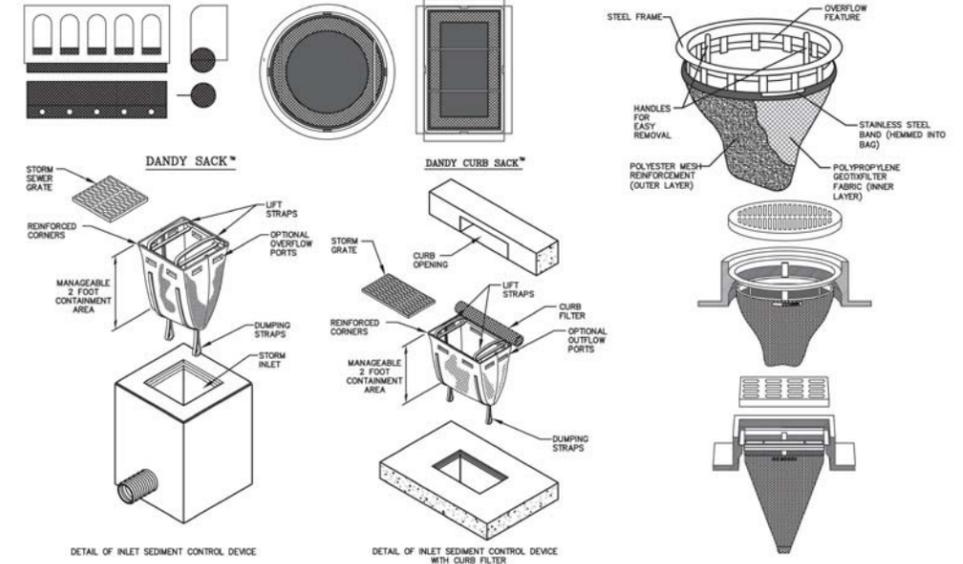
SECTION

NOTES:

1. INSTALL AND MAINTAIN SEDIMENT TRAPS WHERE SHOWN AND AS REQUIRED DOWNSTREAM OF CONSTRUCTION AREA BEFORE COMMENCING WITH ANY CONSTRUCTION ACTIVITIES WHICH CAUSE SILTATION OF CREEKS AND DITCHES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR BYPASSING ALL WATER FROM UPSTREAM OF CREEK/DITCH CROSSING TO DOWNSTREAM OF SEDIMENT TRAP.
3. AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES WHICH CAUSE SILTATION, ALL SEDIMENTS WHICH HAVE COLLECTED ON THE UPSTREAM SIDE OF THE SEDIMENT TRAP SHALL BE REMOVED, AND DISPOSED OF AT AN OFF-SITE LOCATION. THE SEDIMENT TRAP SHALL THEN BE RESHAPED TO THE ORIGINAL CHANNEL DIMENSIONS. WHEN APPROPRIATE THE EXCESS REVETMENT RIP RAP SHALL BE RANDOMLY PLACED IN THE CHANNEL BOTTOM BETWEEN THE CHANNEL CLEARING LIMITS. OTHERWISE REMOVE AND DISPOSE OF EXCESS RIP RAP AT AN OFF-SITE LOCATION.
4. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

SEDIMENT TRAP

SCALE: NOT TO SCALE



- Inlet Protection Inspection and Maintenance**
1. Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
 2. Filter Fabric Fences. If the fabric becomes clogged, torn, or degrades, it should be replaced. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.
 3. Gravel Filters. If the gravel becomes clogged with sediment, it must be carefully removed from the inlet and either cleaned or replaced. Since cleaning gravel at a construction site may be difficult, consider using the sediment-laden stone as fill material and put fresh stone around the inlet. Inspect bags for holes, gashes, and snags, and replace bags as needed. Check gravel bags for proper arrangement and displacement.
 4. Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or be disposed at an appropriate location.
 5. Remove storm drain inlet protection once the drainage area is stabilized.
 6. Clean and regrade area around the inlet and clean the inside of the storm drain inlet as it must be free of sediment and debris at the time of final inspection.

** CONTRACTOR TO USE CATCH-ALL STORMWATER INLET PROTECTOR, DANDY BAG OR APPROVED ALTERNATE.

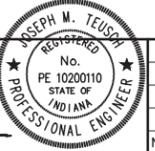
STORM INLET PROTECTION DETAIL

SCALE: NOT TO SCALE

FILE: J:\Projects\0791H.W.Laf.Cumberland.Ave.Sanitary.Sewer.Extn\21.CADD.Files\2.105.Working.Draws\0791HOG13.1.1.03/26/14.11:27.CH-H

GREELEY AND HANSEN
7820 INNOVATION BOULEVARD, SUITE 150
INDIANAPOLIS, INDIANA 46278

DESIGNED	TSH	APPROVED	
DRAWN	MJR	SEAL AFFIXED	
CHECKED	JMT	MARCH 26, 2014	



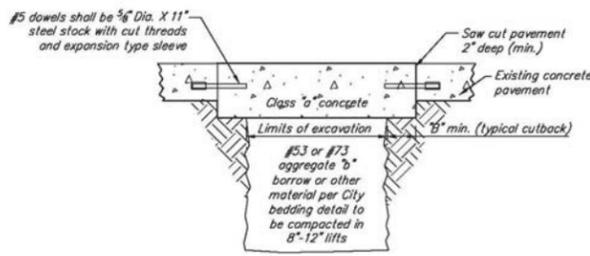
NO.	DATE	APPD	REVISION

SCALE	NOT TO SCALE
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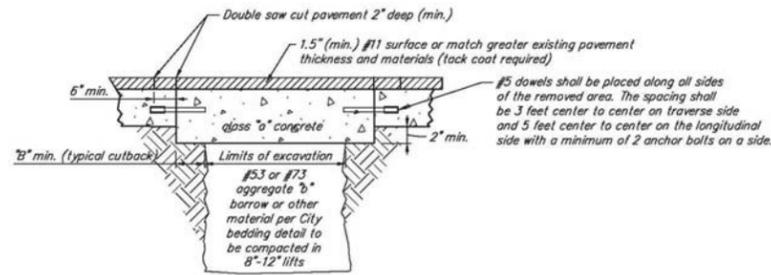
CITY OF WEST LAFAYETTE, INDIANA
CUMBERLAND AVENUE
SANITARY SEWER EXTENSION

GENERAL
EROSION AND
SEDIMENT CONTROL DETAILS

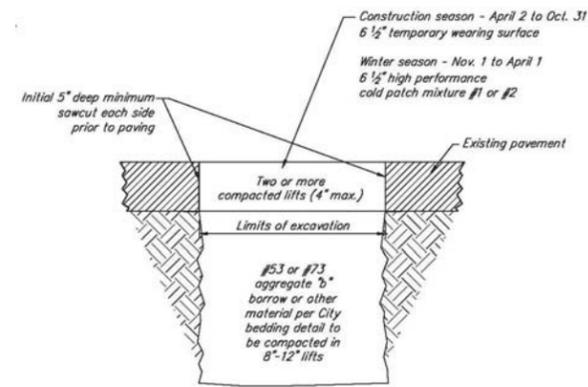
FILE NAME	0791HOG13.DWG
DWG	13
SHEET	13 OF 16
DATE	MARCH 2014
REV	0



Concrete Pavement Repair



Asphalt Over Concrete Or Alternative Asphalt Pavement Repair



TEMPORARY ASPHALT REPAIR

Pavement Restoration Notes:

Permanent pavement restoration:

- Permanent restoration shall commence immediately upon completion of utility work and be complete within 10 working days unless the City Engineer's office grants a longer period. Request for extension shall be in written form and accompanied with a repair schedule. Inventory of existing temporary restorations, and statement indicating the reason(s) for the extension.
- Existing pavement saw cuts shall be in straight lines and are perpendicular to the curb (where possible). Edges of broken pavement shall be squared off to provide neat edge for paving.
- Asphalt shall be placed using professional means to establish a hard, smooth, even graded surface. Compaction shall be done thoroughly and uniformly by a machine roller. Areas too small for machine rolling shall be compacted by hand with mechanical compaction equipment upon prior approval of the City. All courses shall be initially rolled with the roller traveling parallel to the centerline of the pavement beginning at each edge and working toward the center. All rolling and tamping operations shall be completed prior to asphalt cooling to below 180° F.
- Prior to tack coating subbase and edges, the existing surface shall be free of irregularities to provide a reasonably smooth and uniform surface to receive treatment. The edges of existing pavement shall be cleaned to permit adhesion. Tack coat shall not be applied to wet surfaces or when the air temperature is below 45° F. Tack coat may be rolled, brushed or mopped. All excess tack coat shall be squeegeed from the surface.
- All pavement restoration materials to be per INDOT "standard specifications", most recent edition.

Temporary pavement repair:

- Existing pavement initial saw cut to be 5" minimum depth to obtain straight lines perpendicular from the curb edge and neat edge for paving. Edges of broken pavement shall be squared off and trimmed to neat straight lines.
- Temporary pavement material is to be 6 1/2" thick hot mix asphalt. asphalt cold patch, bag asphalt and crushed stone are unacceptable for use. The use of steel street plates must be requested in written form and accompanied with a repair schedule, inventory of existing temporary restorations, and statement indicating the reason(s) for use of plates.
- During winter season when the permanent patch cannot be completed within 10 working days (November 1 thru April 14), if hot mix asphalt is not available, use INDOT approved "high performance cold patch" or equal INDOT approved material.

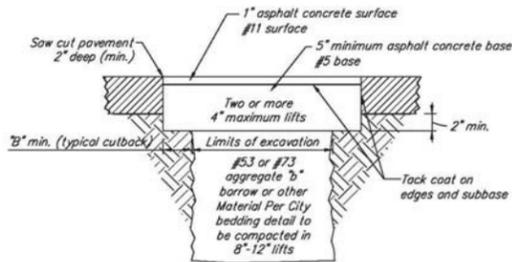
High performance cold patch mixture #1 (upm), is for use in wet and cold conditions and workable at temperatures as low as -15° F.

High performance cold patch mixture #2 (cm300), is for use in wet and cold conditions and workable at temperatures as low as 32° F.

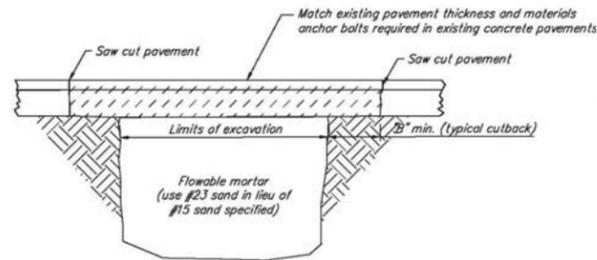
- All materials are to be compacted to form a firm and smooth transition between old and new surface grade. Do not apply hot mix asphalt on a wet surface.
- Upon completion of backfilling, temporary pavement on streets shall be placed by the end of the work day.
- Temporary street restoration is intended to be an interim measure until conditions allow for permanent restoration of the street. The City realizes that at times, temporary restoration is necessary, such as, during the winter season when the asphalt plants are closed and when freezing temperatures make permanent restoration not feasible or when permit work precedes City street reconstruction or rehabilitation permit holders are to minimize the use of temporary restorations when possible. Any work undertaken before the fall asphalt plant closings must be permanently restored prior to the asphalt plant closings. Only work undertaken on or after December 1 (given that the asphalt plants have closed) may be carried over to permanent restoration in the following spring season. All temporary restoration placed during the winter season must be permanently restored within four (4) weeks of spring asphalt plant openings, but no later than May 15th. The City Engineer's office may grant extensions beyond May 15th for permanent restorations when requested in writing and accompanied with a repair schedule, inventory of existing temporary restorations, and a statement indicating the reason(s) for the extension. All temporary restoration must be maintained by the permit holder until permanent restoration has been made.

Special surface streets:

- Any special surfaces shall be restored in-kind. For example: brick surface streets require all pavement cuts to be restored with brick. Cobblestone surface streets must be restored with cobblestone. Permit holder shall salvage as much of the existing brick or cobblestone as possible for reuse in the restoration and shall supply any remaining material required for the restoration.



Asphalt Pavement Repair



Pavement Repair With Flowable Mortar Backfill

(Flowable mortar shall not be used when temperatures are below 40° F)
 ** Use of flowable mortar requires prior approval from the City Engineer's office

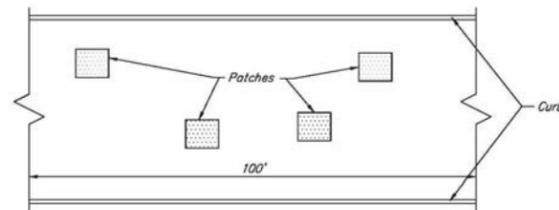
Cutback Table	
Cut- Back "B"	Trench Width
6"	3'-0" or less
9"	3'-1" to 5'-0"
12"	5'-1" or greater

PERMANENT PAVEMENT RESTORATION

Not To Scale

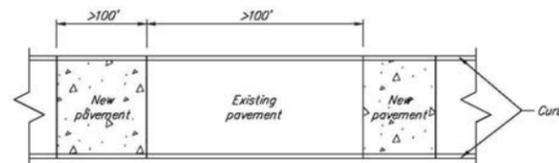
Notes:

All pavement restoration materials to be per INDOT "Standard Specifications" most recent edition.



Multiple cuts shall be defined as any city street or alley, asphalt or concrete that have the following conditions:

- Four (4) or more patches per 100 lineal feet of roadway by an individual utility per project, and
- Area cut is greater than 64 sf in 100 lineal feet of roadway by an individual utility per project.

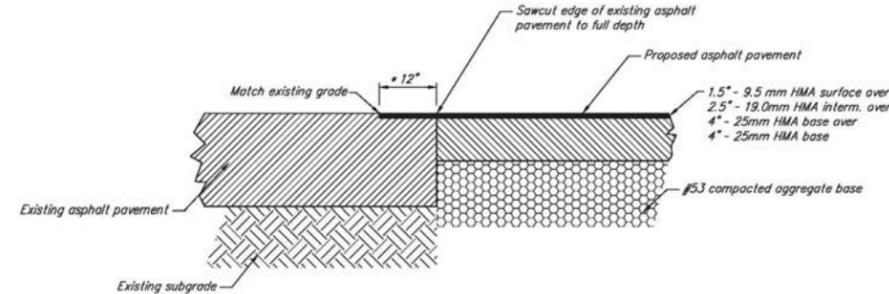


Multiple cuts to be restored as follows:

New pavement areas shall not have gaps of less than 100 feet. Minimum length of new pavement shall be 100 feet.

METHOD FOR REPLACING MULTIPLE OR LARGE CUTS

Not To Scale



LAP JOINT DETAIL

Not To Scale

FILE: J:\Projects\0791H W Laf Cumberland Ave Sanitary Sewer Ext\21 CADD Files\21.05 Working Dwg\0791HOG14.1.1.03/26/14 11:28 GH-H

GREELEY AND HANSEN
 7820 INNOVATION BOULEVARD, SUITE 150
 INDIANAPOLIS, INDIANA 46278

DESIGNED TSH
 DRAWN MJR
 CHECKED JMT

APPROVED
 SEAL AFFIXED
 MARCH 26, 2014



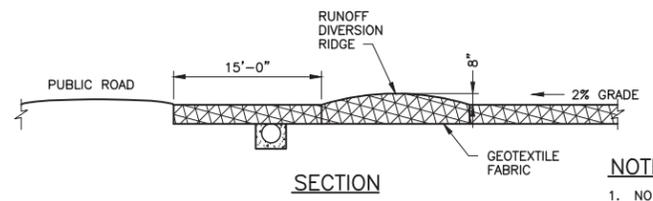
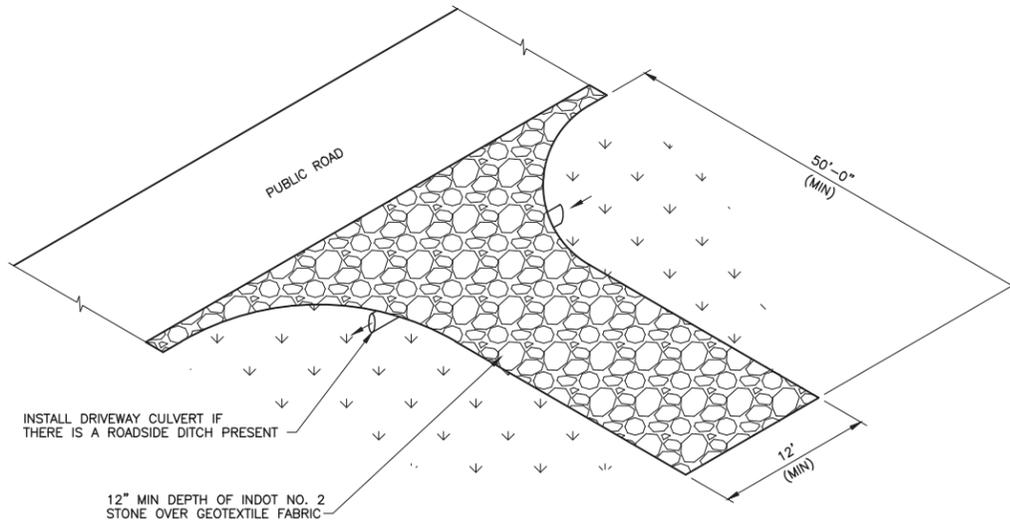
NO.	DATE	APPD	REVISION

SCALE
 NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

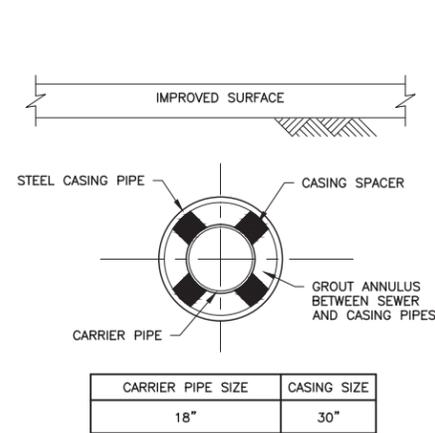
GENERAL
 PAVEMENT AND SIDEWALK
 DETAILS

FILE NAME	0791HOG14.DWG
DWG	14
SHEET	14 OF 16
DATE	MARCH 2014
REV	0



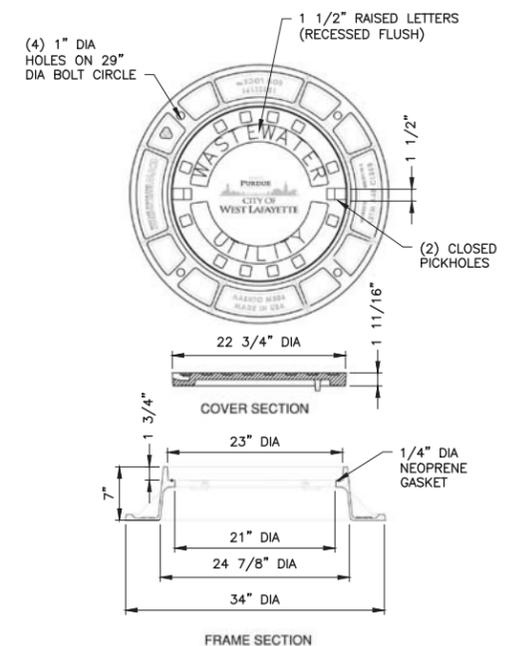
NOTE:
 1. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

CONSTRUCTION ENTRANCE DETAIL
 SCALE: NOT TO SCALE

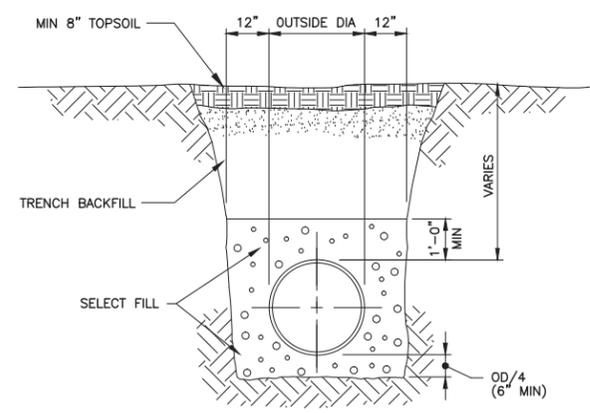


NOTES:
 1. SEE SPECIFICATION SECTION 02445 FOR REQUIREMENTS.
 2. SEAL ANNULUS BETWEEN CARRIER AND CASING PIPES AT BOTH ENDS WITH 8" THICK BRICK BULKHEAD.

TYPICAL CASING SECTION
 SCALE: NOT TO SCALE

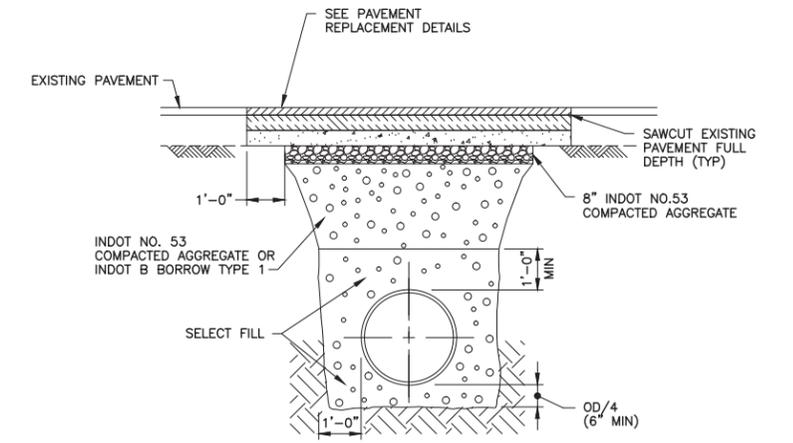


MANHOLE FRAME AND COVER
 SCALE: NOT TO SCALE



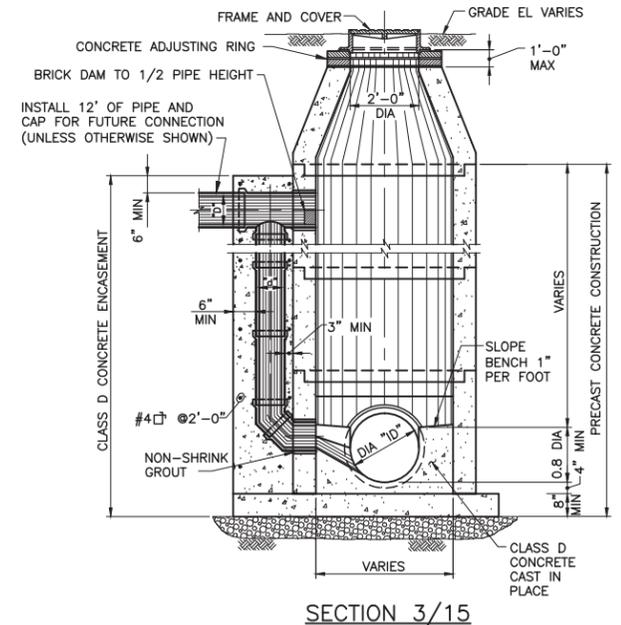
NOTES:
 1. EXTEND PIPE BEDDING TO UNDISTURBED EARTH AT THE SIDES AND BOTTOM OF THE TRENCH.
 2. SEE SPECIFICATION 02317 FOR MATERIAL REQUIREMENTS, PLACEMENT AND COMPACTION OF PIPE BEDDING AND TRENCH BACKFILL.
 3. TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.

TRENCH DETAIL UNIMPROVED AREAS
 NOT TO SCALE



NOTES:
 1. EXTEND PIPE BEDDING TO UNDISTURBED EARTH AT THE SIDES AND BOTTOM OF THE TRENCH.
 2. SEE SPECIFICATION 02317 FOR MATERIAL REQUIREMENTS, PLACEMENT AND COMPACTION OF PIPE BEDDING AND TRENCH BACKFILL.
 3. TRENCH BACKFILL WITHIN A HORIZONTAL DISTANCE OF 5 FEET AND BENEATH ALL ROADWAYS, DRIVEWAYS, PARKING AREAS AND HIGHWAY SHOULDERS SHALL BE FULL DEPTH INDOT NO. 53 STONE.
 4. TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.

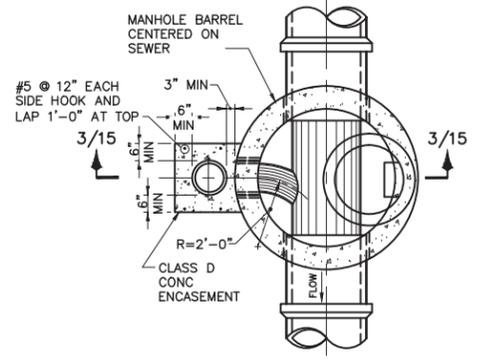
TRENCH DETAIL UNDER IMPROVED AREAS
 NOT TO SCALE



STANDARD DROP MANHOLE
 SCALE: 3/8" = 1'-0"

SCHEDULE FOR DROP MANHOLES

INLET PIPE DIAMETER "D"	DROP PIPE DIAMETER "d"
8"	8"
12"	12"
15"	12"
18"	15"
24"	18"



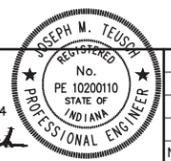
PARTIAL PLAN

NOTES:
 1. FOR SIZE AND DETAIL REQUIREMENTS, SEE STANDARD AND SPECIAL MANHOLES.

FILE: J:\Projects\0791H.W.Laf.Cumberland.Ave.Sanitary.Sewer.Ext\21.CADD.Files\21.05.Working.Dwg\0791HOG15.1.1.03/26/14.14:34.GH-H

Greeley and Hansen
 7820 INNOVATION BOULEVARD, SUITE 150
 INDIANAPOLIS, INDIANA 46278

DESIGNED	TSH	APPROVED	
DRAWN	MJR	SEAL AFFIXED	
CHECKED	JMT	MARCH 26, 2014	



NO.	DATE	APPD	REVISION

SCALE
 NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA
 CUMBERLAND AVENUE
 SANITARY SEWER EXTENSION

GENERAL
 MISCELLANEOUS DETAILS

FILE NAME	0791HOG15.DWG
DWG	15
SHEET	15 OF 16
DATE	MARCH 2014
REV	0

FILE: J:\Projects\0791H.W.Laf.Cumberland.Ave.Sanitary.Sewer.Ext\21.CADD.Files\21.05.Working.Dwgs\0791HOG16.1:1.03/26/14.14:36.GH-H

STRUCTURE TABLE						
NUMBER	GRADE ELEV	RIM ELEV	INVERT IN	INVERT OUT	DIAMETER	TYPE
NEW MH01	677.20	678.20	662.74	660.80	48"	STANDARD
NEW MH02	683.89	684.89	663.97	663.87	60"	SPECIAL
NEW MH03	692.65	693.65	665.30	665.10	60"	SPECIAL
NEW MH04	693.89	694.89	666.57	666.37	60"	SPECIAL
NEW MH05	695.91	696.91	667.80	667.60	60"	SPECIAL
NEW MH06	702.74	703.74	668.48 (18") 669.11 (8") 687.23 (8")	668.28	60"	EXTERIOR DROP
NEW MH07	701.28	702.28	669.38	669.18	60"	SPECIAL
NEW MH08	702.96	703.96	669.87	669.67	60"	SPECIAL
NEW MH09	711.90	712.90	670.86	670.76	60"	SPECIAL
NEW MH10	708.47	709.47	671.95	671.75	60"	SPECIAL
NEW MH11	698.73	699.73	673.04	672.84	60"	SPECIAL
NEW MH12	694.00	694.00	674.23	673.93	60"	SPECIAL
NEW MH13	704.11	704.11	675.10 (18") 675.80 (6") 694.00 (6")	674.80	60"	EXTERIOR DROP
NEW MH14	699.28	700.28	676.14	676.04	60"	SPECIAL
NEW MH15	689.45	690.45	677.38	677.08	48"	STANDARD
NEW MH16	685.59	686.59	678.23	677.93	48"	STANDARD
NEW MH17	689.04	690.04	679.15	679.05	48"	STANDARD
NEW MH18	687.08	688.08	679.86	679.76	48"	STANDARD
NEW MH19	689.56	690.56	681.68	680.74	48"	STANDARD
NEW MH20	692.26	693.26	684.65	682.65	48"	STANDARD
NEW MH21	693.13	694.13	685.26	684.96	48"	STANDARD
NEW MH22	694.42	695.42	686.08	685.88	48"	STANDARD
NEW MH23	697.46	698.46		686.67	60"	INSIDE DROP

PIPE TABLE			
UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	PIPE SIZE	MATERIAL/CLASS
NEW MH01	MH	18"	PVC SDR26
NEW MH02	NEW MH01	18"	PVC SDR26
NEW MH03	NEW MH02	18"	PVC DR 18
NEW MH04	NEW MH03	18"	PVC DR 18
NEW MH05	NEW MH04	18"	PVC DR 18
NEW MH06	NEW MH05	18"	DI CLASS 53
NEW MH07	NEW MH06	18"	DI CLASS 53
NEW MH08	NEW MH07	18"	DI CLASS 53
NEW MH09	NEW MH08	18"	DI CLASS 53
NEW MH10	NEW MH09	18"	DI CLASS 53
NEW MH11	NEW MH10	18"	DI CLASS 53
NEW MH12	NEW MH11	18"	PVC DR 18
NEW MH13	NEW MH12	18"	PVC DR 18
NEW MH14	NEW MH13	18"	PVC DR 18
NEW MH15	NEW MH14	18"	PVC DR 18
NEW MH16	NEW MH15	18"	PVC SDR26
NEW MH17	NEW MH16	18"	PVC SDR26
NEW MH18	NEW MH17	18"	PVC SDR26
NEW MH19	NEW MH18	18"	PVC SDR26
NEW MH20	NEW MH19	18"	PVC SDR26
NEW MH21	NEW MH20	18"	PVC SDR26
NEW MH22	NEW MH21	18"	PVC SDR26
NEW MH23	NEW MH22	18"	PVC SDR26

NOTES:

1. IN IMPROVED AREAS, OR WHERE OTHERWISE NOTED, RIM ELEVATIONS SHALL BE FLUSH WITH FINISHED GRADE. IN UNIMPROVED AREAS RIM ELEVATIONS SHALL BE SET 12" ABOVE GRADE. FILL WILL THEN BE ADDED FOR 6' IN ALL DIRECTIONS FROM MANHOLE TO RAISE GRADE TO MANHOLE RIM ELEVATION.

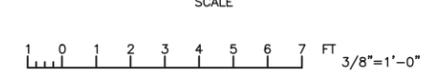
GREELEY AND HANSEN
7820 INNOVATION BOULEVARD, SUITE 150
INDIANAPOLIS, INDIANA 46278

DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
MARCH 26, 2014



NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA
CUMBERLAND AVENUE
SANITARY SEWER EXTENSION

GENERAL
STRUCTURE DATA TABLES

FILE NAME	0791HOG16.DWG		
DWG	16		
SHEET	16	OF	16
DATE	MARCH 2014	REV	0