

CITY OF WEST LAFAYETTE, INDIANA

DRAWINGS FOR

SHERATON AND FAIRWAY KNOLLS LIFT STATION IMPROVEMENTS

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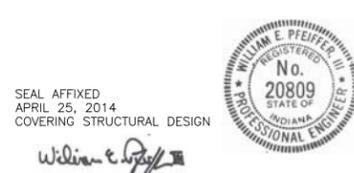
DAVID M. BUCK, P.E.



GREELEY AND HANSEN

7820 INNOVATION BOULEVARD, SUITE 150
INDIANAPOLIS, INDIANA 46278

APRIL 2014

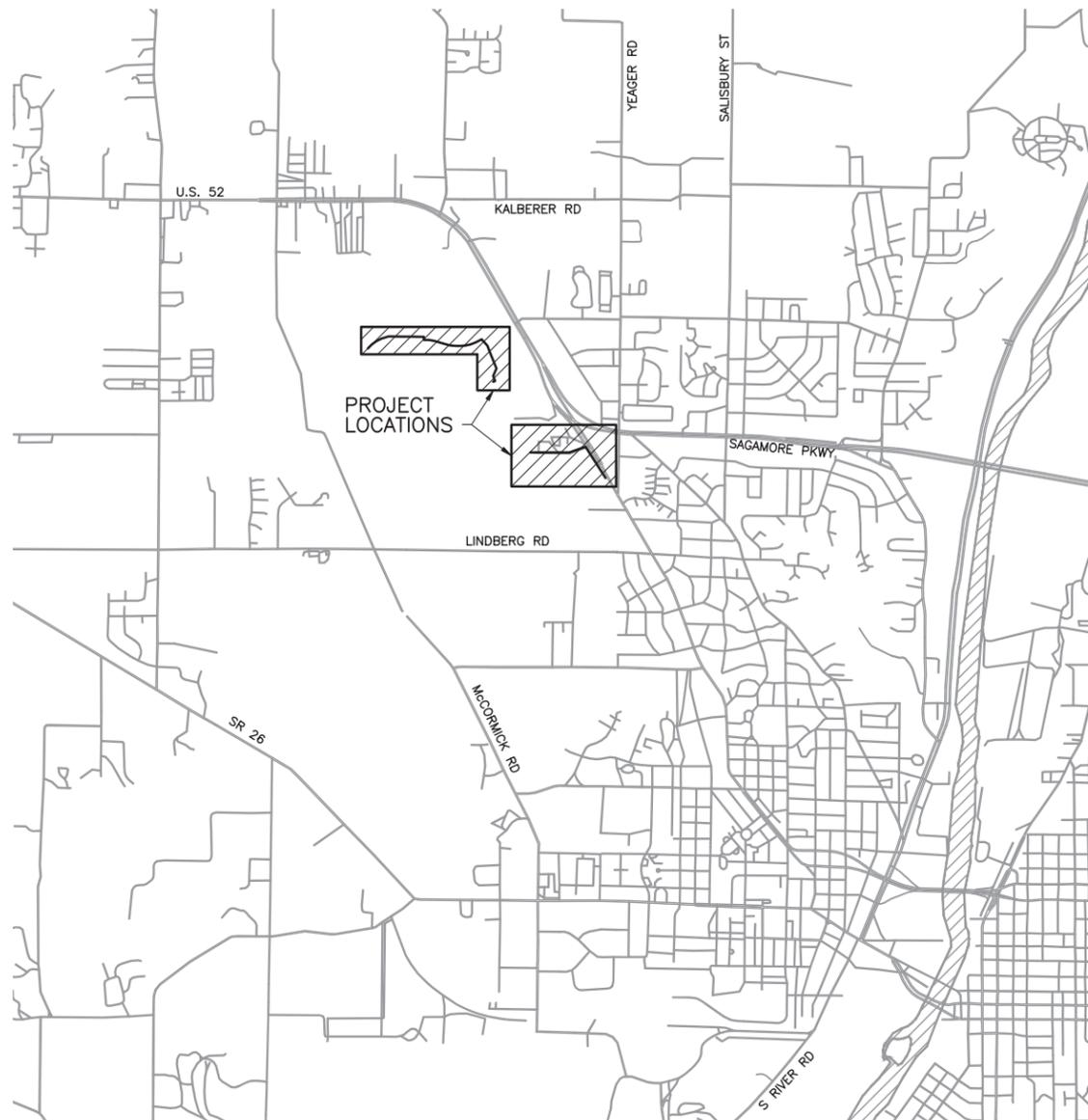


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OPERATING AUTHORITIES

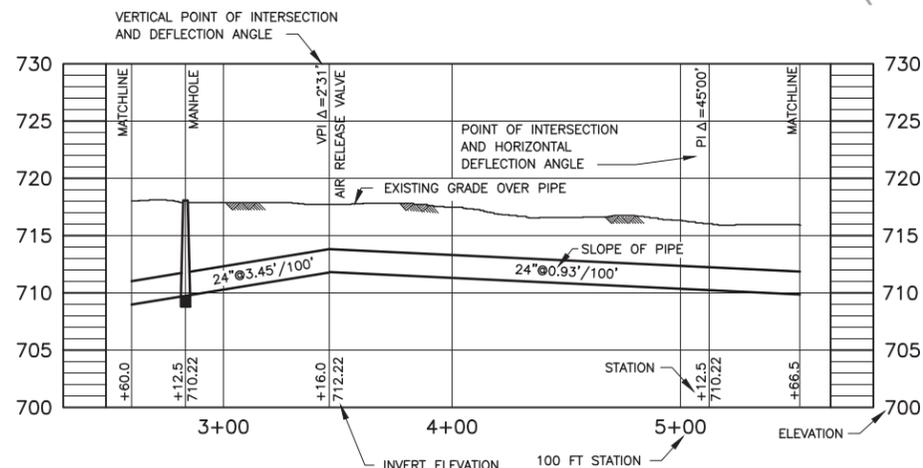
SANITARY/STORM/STREETS	GAS:	TELECOMMUNICATIONS:
DAVID BUCK, P.E. WEST LAFAYETTE ENGINEER 609 NAVAJO DRIVE WEST LAFAYETTE, IN 47906 (765) 775-5130	JASON LUCAS VECTREN 1995 E. MAIN STREET DANVILLE, IN 46122 (317) 718-3616	TED FOSTER FRONTIER COMMUNICATIONS 3216 IMPERIAL PKWY LAFAYETTE, IN 47909 (765) 423-3531
FIRE DEPARTMENT: MIKE FRANCIS, CAPTAIN WEST LAFAYETTE FIRE DEPT 300 NORTH STREET WEST LAFAYETTE, IN 47906 (765) 775-5177	ELECTRIC: CINDY KERKER TIPMONT REMC 403 S. MAIN STREET LINDEN, IN 47955 (765) 463-1314 EXT. 214	ERIC GEORGE PURDUE RESEARCH FOUNDATION 1281 WIN HENTSCHEL BLVD. WEST LAFAYETTE, IN 47906 (765) 588-1055
WATER: BRANDON FRANCE INDIANA-AMERICAN WATER CO. 1007 HAPPY HOLLOW ROAD WEST LAFAYETTE, IN 47906 (765) 743-7973, EXT. 14	JORDAN WALLPE DUKE ENERGY 3395 GREENBUSH STREET LAFAYETTE, IN 47905 (765) 446-4010	JERRY SHUTTERS COMCAST COMMUNICATIONS 1002 E. CENTER ROAD KOKOMO, IN 46902 (765) 455-5935
SANITARY SEWER: SCOTT LODS AMERICAN SUBURBAN UTILITIES 3350 W. 250 NORTH WEST LAFAYETTE, IN 47906 (765) 463-3856	GARY MCNAMEE DUKE ENERGY ASSET PROTECTION 2727 CENTRAL AVENUE COLUMBUS, IN 47201 (812) 375-2021	JEFF KETTERER METRONET 3701 COMMUNICATIONS WAY EVANSVILLE, IN 47715 (317) 599-1192



LOCATION MAP
SCALE: 1"=2000'

CONTROL POINTS SET

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM #9	1898007.35	2994048.66	688.72	CHISELED X IN CONCRETE LIGHT BASE WEST ENTRANCE OF WAL-MART 100' SOUTH OF CUMBERLAND AVE.
TBM #10	1897296.05	2994262.15	691.54	CHISELED X IN FIRE HYDRANT FLANGE BOLT, 60'± NORTH OF NW CORNER OF WAL-MART BUILDING.
TBM #20	1897296.05	2994262.15	718.57	MAG SPIKE ON POWER POLE 029-934 ON SW SIDE OF NORTHWESTERN AVE 300' S OF NEIL ARMSTRONG STREET.
TBM #21	1897296.05	2994262.15	717.71	CHISELED X ON FIRE HYDRANT NE FLANGE BOLT ON THE SW SIDE OF THE INTERSECTION OF NEIL ARMSTRONG STREET AND PALMER DRIVE.
TBM #22	1897296.05	2994262.15	687.43	CHISELED X ON FIRE HYDRANT NW FLANGE BOLT ON THE S SIDE OF PALMER DRIVE WEST OF THE INTERSECTION WITH BURKE COURT.



PROFILE
NOT TO SCALE

GENERAL NOTES:

- HORIZONTAL CONTROL IS BASED ON THE INDIANA STATE PLANE COORDINATE SYSTEM NAD 1983 WEST ZONE. ALL ELEVATIONS REFER TO NORTH AMERICAN VERTICAL DATUM 1988.
- LOCATIONS AND ELEVATIONS SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO BEGINNING WORK. VERIFY THE LOCATIONS, ELEVATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THE WORK PRIOR TO CONSTRUCTION.
- EXPOSE ALL EXISTING UTILITIES WELL IN ADVANCE OF CROSSING WITH NEW FORCE MAIN AND SEWER INSTALLATION TO ALLOW FOR GRADE ADJUSTMENT AT NO ADDITIONAL COST. IF REQUIRED AFTER FIELD VERIFICATION, ADJUST ALIGNMENT AND GRADE OF NEW PIPELINES AS DIRECTED BY THE ENGINEER.
- SUPPORT, PROTECT AND RESTORE ALL UTILITIES AND APPURTENANCES AS REQUIRED TO COMPLETE ALL THE WORK. OVERHEAD UTILITY POLE HANDLING BY CONTRACTOR.
- WHERE NEW SANITARY SEWER CROSSES OVER OR UNDER EXISTING WATER MAINS, PROVIDE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER.
- PROVIDE A MINIMUM 4 FEET OF COVER OVER ALL FORCE MAIN PIPE.
- IF FIELD TILE IS ENCOUNTERED DURING CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ENGINEER OF THEIR FINDINGS. IF DAMAGED BY CONTRACTOR, REPAIR AT NO ADDITIONAL COST TO OWNER.
- CONTAIN CONSTRUCTION OPERATIONS WITHIN THE LIMITS OF THE RIGHT-OF-WAY, EASEMENTS AND LIMITS INDICATED ON THE DRAWINGS AND USE CARE IN PLACING MATERIALS AND EQUIPMENT SO AS TO CAUSE THE LEAST POSSIBLE DAMAGE TO PROPERTY AND RESTORE PROPERTY TO PRECONSTRUCTION CONDITIONS.
- COMPLETE WORK UNDER THE CONSTRAINTS IN SPECIFICATION SECTION 01110.
- ALL CONSTRUCTION ACTIVITY TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE OSHA STANDARDS FOR WORKER SAFETY.
- PROVIDE TEMPORARY CONSTRUCTION FENCE AROUND OPEN EXCAVATIONS.
- FOR CONTRACTOR'S CONVENIENCE, AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN SUBMITTED TO THE TIPPECANOE COUNTY WATER AND SOIL CONSERVATION DISTRICT IN ACCORDANCE WITH RULE 5 STORMWATER PERMIT REQUIREMENTS. CONTRACTOR MAY DEVELOP AND SUBMIT A SEPARATE EROSION CONTROL PLAN. SEE SPECIFICATIONS.
- A DISTINCTION BETWEEN NEW AND EXISTING MATERIALS, EQUIPMENT AND STRUCTURES HAS BEEN MADE ON THE DRAWINGS BY LINE WEIGHT. HEAVY (OR) BOLD REPRESENTS NEW AND LIGHT REPRESENTS EXISTING.
- ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THESE GENERAL NOTES SHALL BE INCLUDED IN VARIOUS CONTRACT ITEMS, AND NO SEPARATE PAYMENT WILL BE MADE.
- IN RESOLVING CONFLICTS, ERRORS, DISCREPANCIES AND DISPUTES CONCERNING THE SCOPE OF WORK TO BE PERFORMED BY THE CONTRACTOR, AND OTHER RIGHTS AND OBLIGATIONS OF OWNER AND CONTRACTOR, THE DOCUMENT EXPRESSING THE GREATER QUANTITY, QUALITY OR OTHER SCOPE OF WORK IN QUESTIONS, OR IMPOSING THE GREATER OBLIGATION UPON CONTRACTOR AND AFFORDING THE GREATER RIGHT OR REMEDY TO OWNER SHALL GOVERN AS ENUMERATED IN THE AGREEMENT.

LEGEND

■	BEEHIVE STORM INLET	○	ROCKS
—BT—	BURIED TELEPHONE	○	SANITARY MANHOLE
●	CONTROL POINT	—SS—	SANITARY SEWER
⊙	SOIL BORING	—ST—	STORM SEWER
⊞	CURB STORM INLET	⊙	SIGN
⊞	CURB STORM INLET PROTECTION	x 685.8	SPOT ELEVATION
—D—	DRAIN	(000.00)	NEW PAVEMENT GRADE
—E—	ELECTRIC	(000.00)	ALL OTHER FINISH GRADES
000	EXISTING CONTOUR	⊞	STORM INLET
—X—	FENCE	⊞	TELEPHONE PEDESTAL
—FO—	FIBER OPTIC	⊞	TREE
—FM—	FORCE MAIN	⊞	TREE/BRUSH LINE
—GW—	GUY WIRE	—	UTILITY AND DRAINAGE EASEMENT
—FL—	FLOW LINE	—W—	WATER
—G—	NATURAL GAS	—WL—	WET LAND
—OU—	OVERHEAD UTILITIES	—	CONSTRUCTION LIMITS
—PL—	PROPERTY LINE	—SF—	SILT FENCING
—RW—	RIGHT OF WAY	⊞	WATER METER
		⊞	WATER VALVE
		⊞	WET LAND FLAG

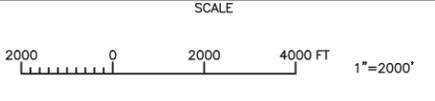
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GREELEY AND HANSEN
7820 INNOVATION BOULEVARD, SUITE 150
INDIANAPOLIS, INDIANA 46278

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DRAWN	MJR	SEAL AFFIXED	
CHECKED	JMT	APRIL 25, 2014	



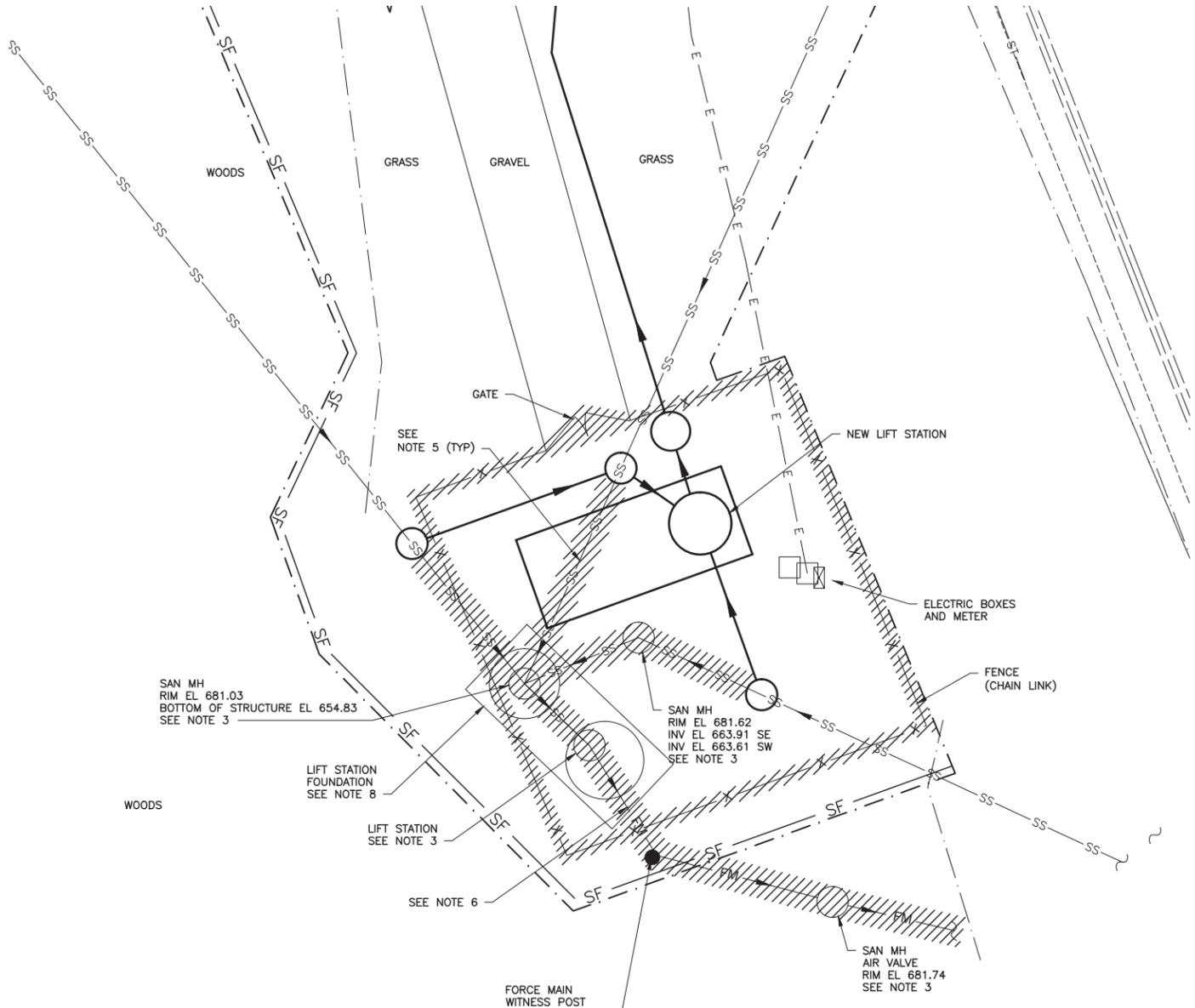
NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
INDEX, GENERAL NOTES,
LEGEND AND LOCATION MAP

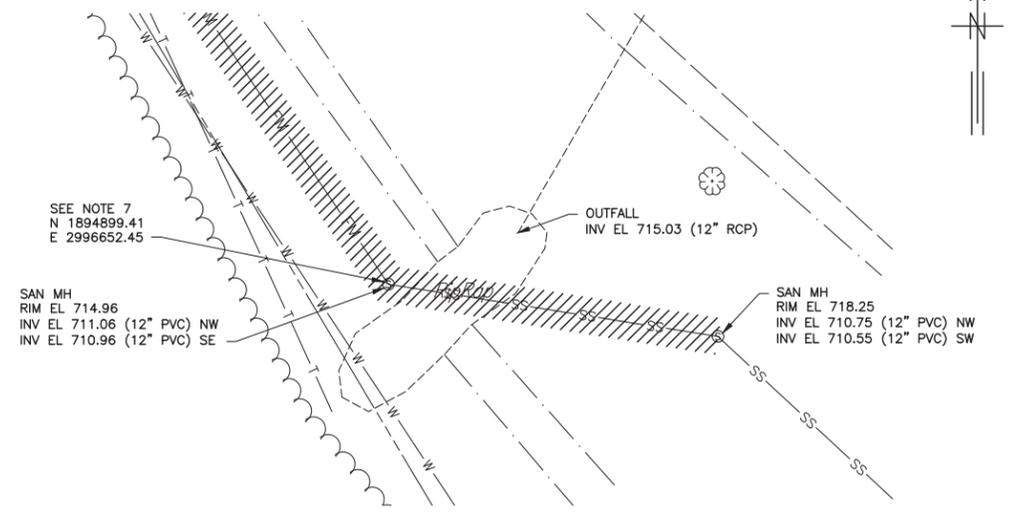
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DATE	APRIL 2014
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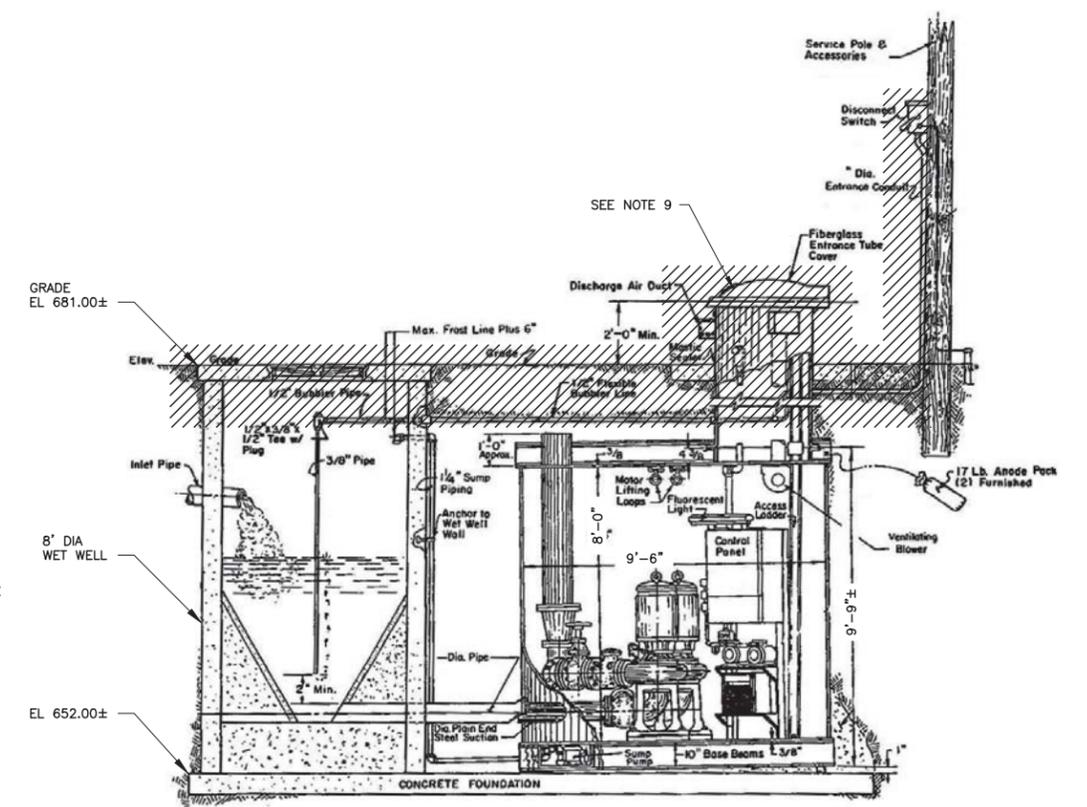
PLAN - DEMOLITION
SCALE: 1"=10'

LIFT STATION DEMOLITION NOTES:

- CROSS HATCH INDICATES REMOVAL OF STRUCTURES, PIPING AND EQUIPMENT.
- CONTRACTOR SHALL INSPECT THE SITE PRIOR TO BIDDING PROJECT TO SEE EXTENT OF THE DEMOLITION WORK INVOLVED AND TO INCLUDE THE NECESSARY WORK IN BID.
- DEMOLISH EXISTING LIFT STATION AND MANHOLES TO 24" BELOW GRADE. FILL LIFT STATION, MANHOLES AND WET WELL WITH FLOWABLE FILL TO 24" BELOW GRADE. BACKFILL TOP 24" WITH NO. 53 COMPACTED AGGREGATE. VENT STRUCTURES DURING FLOWABLE FILL INSTALLATION TO ENSURE NO VOIDS ARE CREATED.
- ALL ABOVE GROUND ELECTRICAL COMPONENTS, CONDUIT AND WIRING, ANTENNA TOWER, AND SUPPORT STRUCTURES SHALL BE DE-ENERGIZED, DISCONNECTED AND REMOVED.
- SEWERS BETWEEN NEW MANHOLES AND EXISTING LIFT STATION TO BE ABANDONED IN PLACE AND FILLED WITH FLOWABLE FILL.
- ABANDON FORCE MAIN IN PLACE. FILL ENTIRE FORCE MAIN WITH FLOWABLE FILL. COLLECT AND PROPERLY DISPOSE OF SEWAGE THAT IS PUSHED OUT OF THE FORCE MAIN BY THE FLOWABLE FILL. ASSUME 80 CYS OF FLOWABLE FILL REQUIRED.
- DEMOLISH EXISTING MANHOLE TO 24" BELOW GRADE. FILL SANITARY SEWER AND MANHOLE WITH FLOWABLE FILL TO 24" BELOW GRADE. BACKFILL TOP 24" WITH SOIL, COMPACT AND SEED. EXCAVATION TO BE ENCLOSED WITH CONSTRUCTION FENCE AND SILT FENCE.
- LOCATION AND ORIENTATION OF LIFT STATION COMPONENTS (WET WELL, DRY WELL, ETC.) IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
- INSTALL A 5'x5'x12" THICK CLASS D CONCRETE CAP WITH #4 REINFORCING STEEL AT 12" ON CENTER EACH WAY. CONCRETE CAP IS TO BE CENTERED OVER THE LIFT STATION CHIMNEY (MAN WAY ACCESS) WITH THE TOP OF THE SLAB 2" BELOW FINISHED GRADE. INSTALL RX WATERSTOP BETWEEN THE CAP AND LIFT STATION CHIMNEY 3" FROM THE BASE OF THE CAP.



**PLAN - SHERATON LIFT STATION
FORCE MAIN DISCHARGE**
SCALE: 1"=10'



SECTION - DEMOLITION
SCALE: NOT TO SCALE

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SEAL AFFIXED
APRIL 25, 2014

Joseph Jansch
REGISTERED PROFESSIONAL ENGINEER



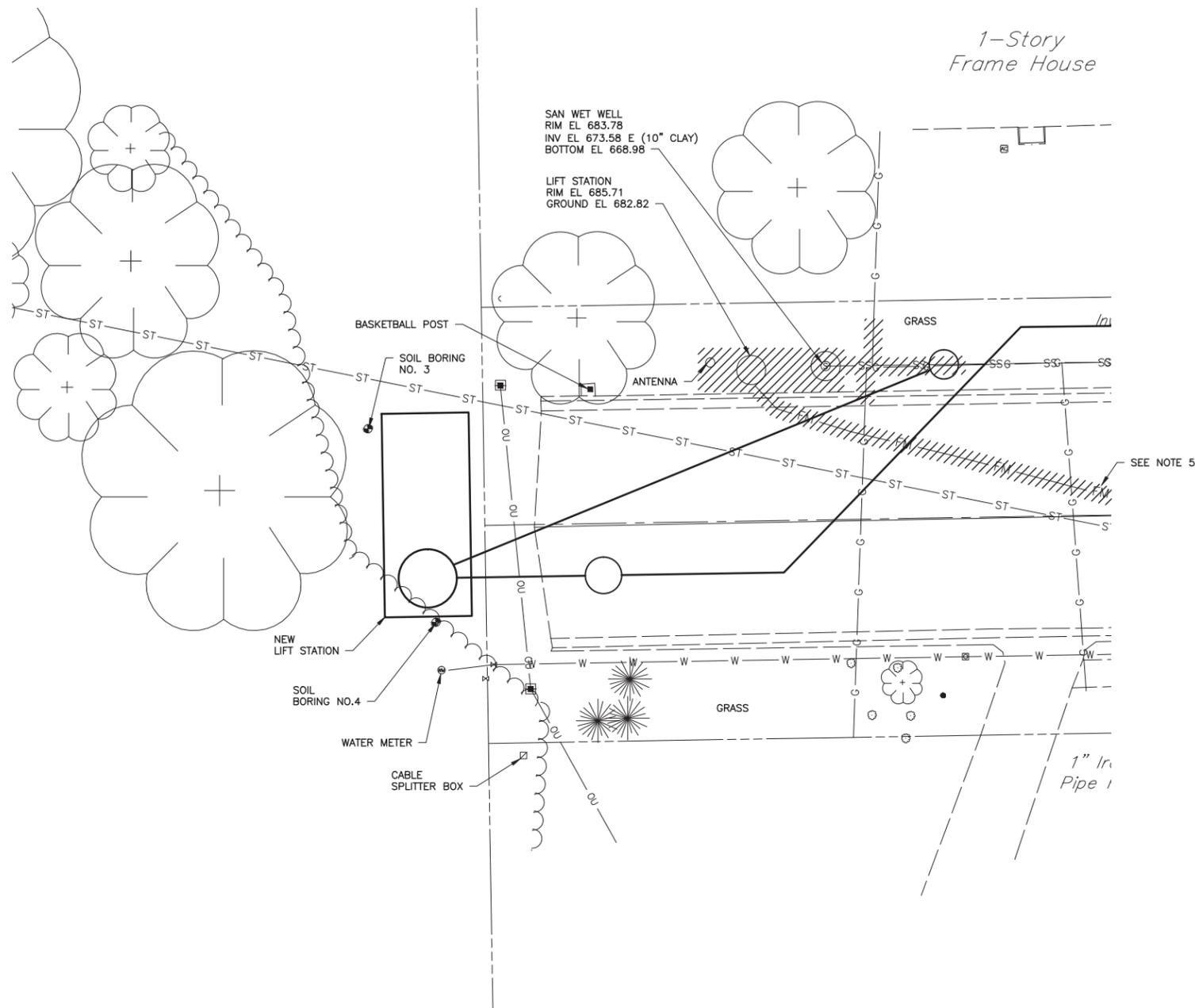
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CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
DEMOLITION PLAN AND SECTION
SHERATON LIFT STATION

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SHEET	2 OF 24
DATE	APRIL 2014
REV	0



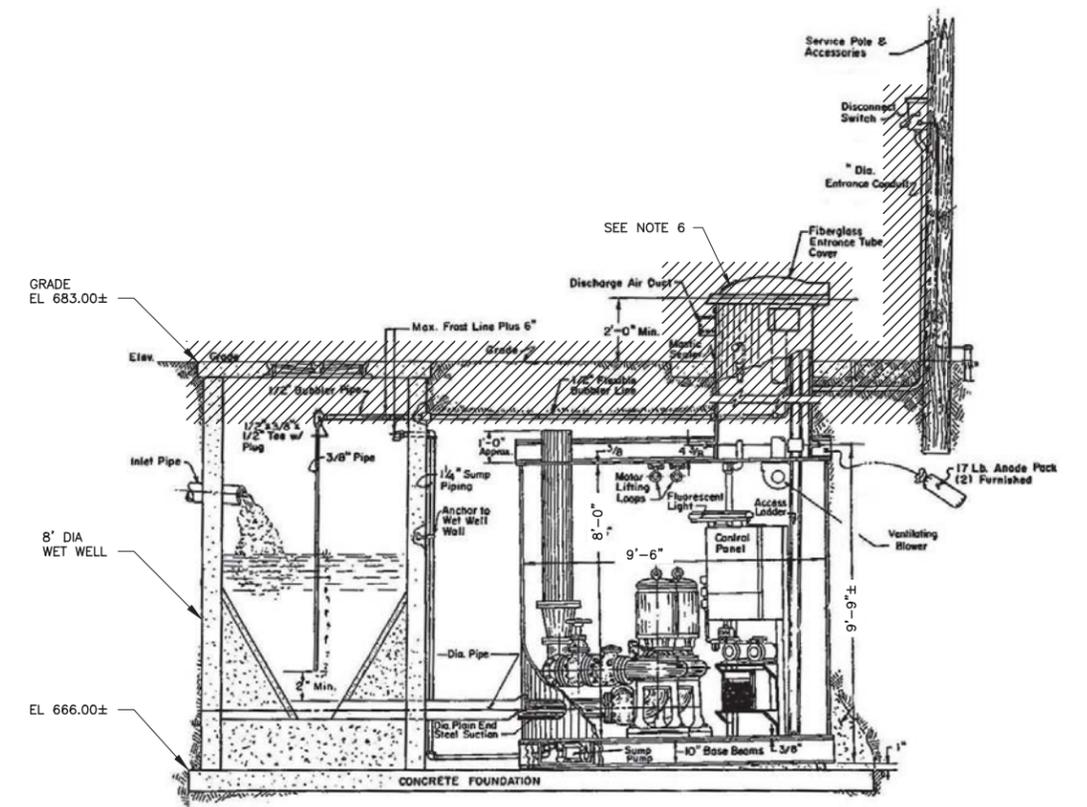
DISCHARGE
MH NO. 250472
SEE NOTE 5
N 1895590.41
E 2996335.81

PLAN - FAIRWAY KNOLLS
LIFT STATION FORCE MAIN DISCHARGE
SCALE: NOT TO SCALE

PLAN - DEMOLITION
SCALE: 1"=10'

LIFT STATION DEMOLITION NOTES:

- CROSS HATCH INDICATES REMOVAL OF STRUCTURES, PIPING AND EQUIPMENT.
- CONTRACTOR SHALL INSPECT THE SITE PRIOR TO BIDDING PROJECT TO SEE EXTENT OF THE DEMOLITION WORK INVOLVED AND TO INCLUDE THE NECESSARY WORK IN BID.
- DEMOLISH EXISTING LIFT STATION TO 24" BELOW GRADE. FILL LIFT STATION WITH FLOWABLE FILL TO 24" BELOW GRADE. BACKFILL TOP 24" WITH SOIL, COMPACT AND SEED IN GRASSY AREAS. BACKFILL TOP 24" WITH NO. 53 COMPACTED AGGREGATE AND PAVE IN IMPROVED AREAS. VENT STRUCTURES DURING FLOWABLE FILL INSTALLATION TO ENSURE NO VOIDS ARE CREATED.
- ALL ABOVE GROUND ELECTRICAL COMPONENTS, CONDUIT AND WIRING, ANTENNA TOWER, AND SUPPORT STRUCTURES SHALL BE DE-ENERGIZED, DISCONNECTED AND REMOVED.
- ABANDON FORCE MAIN IN PLACE. FILL ENTIRE FORCE MAIN WITH FLOWABLE FILL. COLLECT AND PROPERLY DISPOSE OF SEWAGE THAT IS PUSHED OUT OF THE FORCE MAIN BY THE FLOWABLE FILL. ASSUME 15 CYS OF FLOWABLE FILL REQUIRED.
- INSTALL A 5'x5'x12" THICK CLASS D CONCRETE CAP WITH #4 REINFORCING STEEL AT 12" ON CENTER EACH WAY. CONCRETE CAP IS TO BE CENTERED OVER THE LIFT STATION CHIMNEY (MAN WAY ACCESS) WITH THE TOP OF THE SLAB 2' BELOW FINISHED GRADE. INSTALL RX WATERSTOP BETWEEN THE CAP AND LIFT STATION CHIMNEY 3" FROM THE BASE OF THE CAP.



SECTION - DEMOLITION
SCALE: NOT TO SCALE

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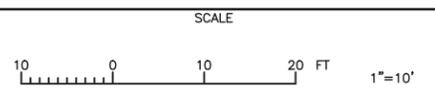
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DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014

Joseph Janssen



NO.	DATE	APPD	REVISION

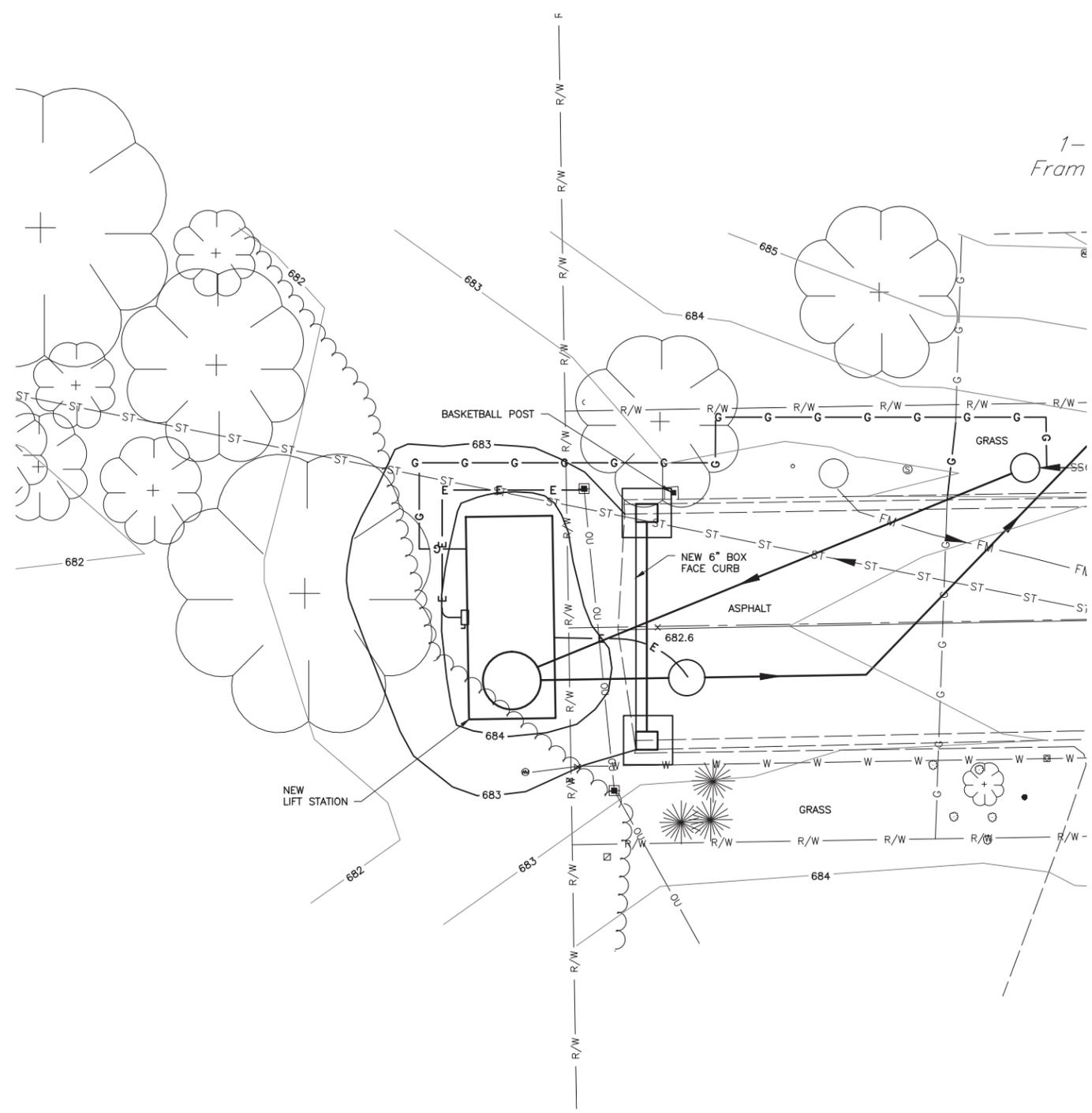


CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
DEMOLITION PLAN AND SECTION
FAIRWAY KNOLLS LIFT STATION

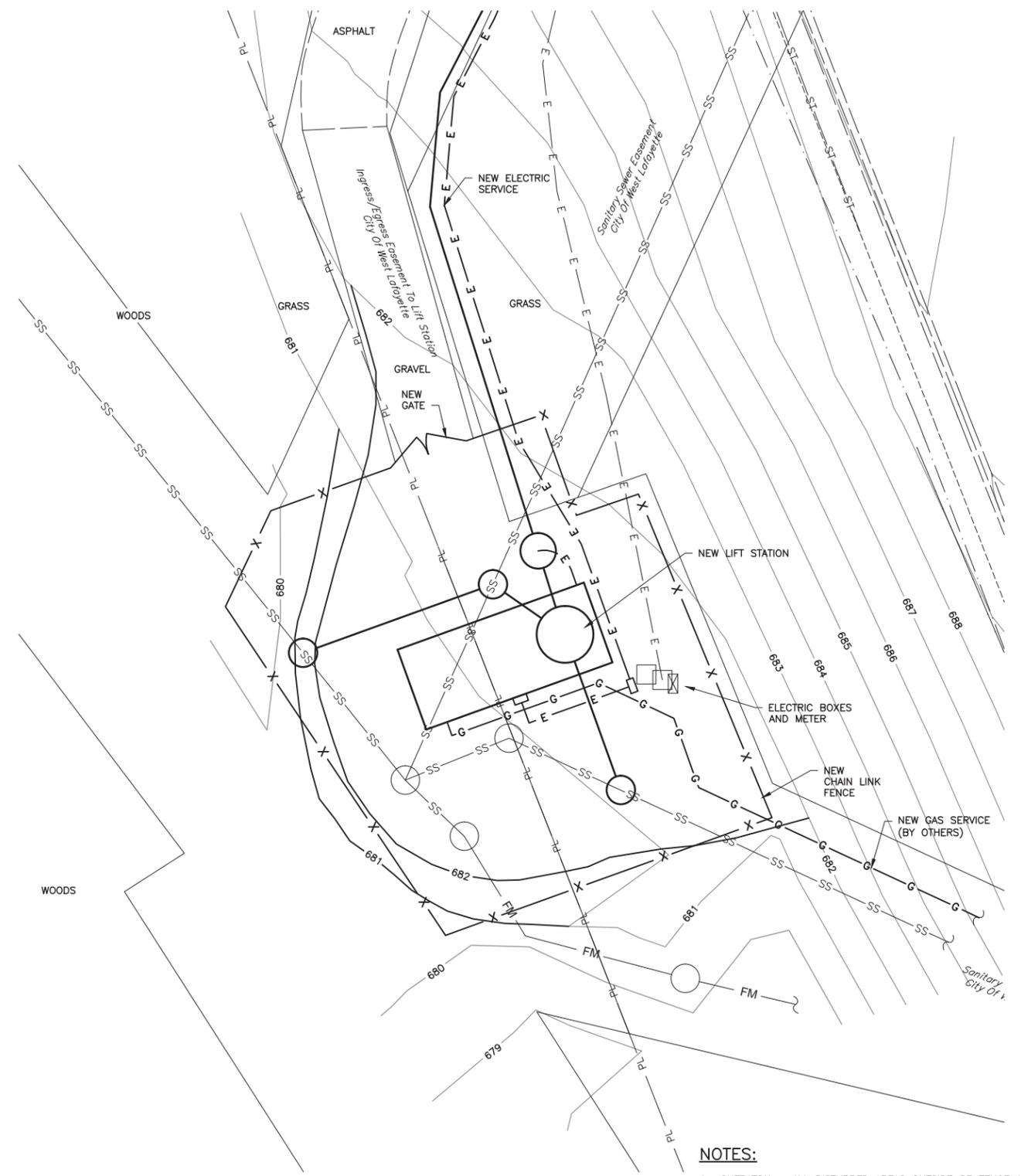
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DATE	APRIL 2014
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PLAN - FAIRWAY KNOLLS

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PLAN - SHERATON

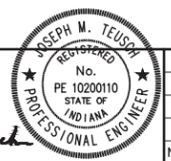
- NOTES:**
- SHERATON - ALL DISTURBED AREAS OUTSIDE OF FENCE AND DRIVE TO BE SEEDED PER SPECIFICATION SECTION 02900. AREAS WITHIN FENCE AND DRIVE TO BE TOPPED WITH A MINIMUM OF 6" COMPACTED NO.53 STONE. IF EXISTING ASPHALT DRIVE IS DAMAGED DURING CONSTRUCTION REPAIR PER DETAILS.
 - FAIRWAY KNOLLS - AREA BETWEEN NEW CURB AND LIFT STATION IS TO BE A MINIMUM OF 6" OF NO.53 STONE. CURB AND PAVEMENT WORK PER DETAILS. REMAINING DISTURBED AREA TO BE SEEDED PER SPECIFICATION SECTION 02900.

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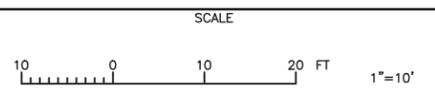
DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014

Joseph Jansch
PROFESSIONAL ENGINEER



NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
NEW GRADING PLANS

FILE NAME	079110G04.DWG
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SHEET	4 OF 24
DATE	APRIL 2014
REV	0

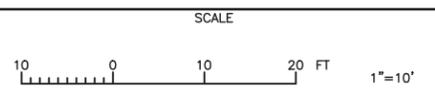
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STRUCTURE DATA TABLE							
MANHOLE NUMBER	TYPE	DIAMETER	APPROX GRADE ELEVATION	INLET SIZE	INVERT ELEVATION	OUTLET SIZE	INVERT ELEVATION
MH-1	DOGHOUSE MANHOLE	60"	682.00	EXST 12" NW	664.00±	NEW 12" E	663.50
MH-2	DOGHOUSE MANHOLE	60"	682.75	NEW 12" W EXST 12" NE	663.32 662.00±	NEW 12" SE	661.50
MH-3	WET WELL	96"	682.75	NEW 12" NW NEW 12" SE NEW 4" NW	661.43 663.26 674.50	NEW 10" NW	676.75
MH-4	DOGHOUSE MANHOLE	60"	682.25	EXST 10" SE	663.91	NEW 12" NW	663.41
MH-5	METER VAULT	60"	682.75	NEW 10" SE	677.00	NEW 10" NW NEW 4" SE	677.00 675.50

- NOTES:**
1. REMOVE EXISTING FENCE AND GATE AND REPLACE WITH NEW CHAIN LINK FENCE AND GATE.
 2. FIELD VERIFY INVERTS OF EXISTING SEWERS AND PROVIDE TO ENGINEER PRIOR TO CONSTRUCTING NEW MH-1, NEW MH-2, NEW MH-3 AND NEW MH-4.
 3. MAINTAIN UNINTERRUPTED DELIVERY ACCESS AT ALL TIMES.
 4. LOCATION AND ORIENTATION OF LIFT STATION COMPONENTS (WET WELL, DRY WELL, ETC.) IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
 5. METER VAULT DRAIN LINE NOT SHOWN FOR CLARITY.
 6. PROVIDE SHORING TO MAINTAIN EXCAVATION WITHIN CONSTRUCTION LIMITS. EXTENTS OF SHORING TO BE DETERMINED BY CONTRACTOR. SEE SPECIFICATION SECTION 02251.
 7. VECTREN TO INSTALL GAS METER, REGULATOR, GAS LINE AND CAP PIPE AT APPROXIMATELY THIS LOCATION. CONTRACTOR TO INSTALL REMAINING GAS PIPING TO CONNECT TO LIFT STATION.

PLAN



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

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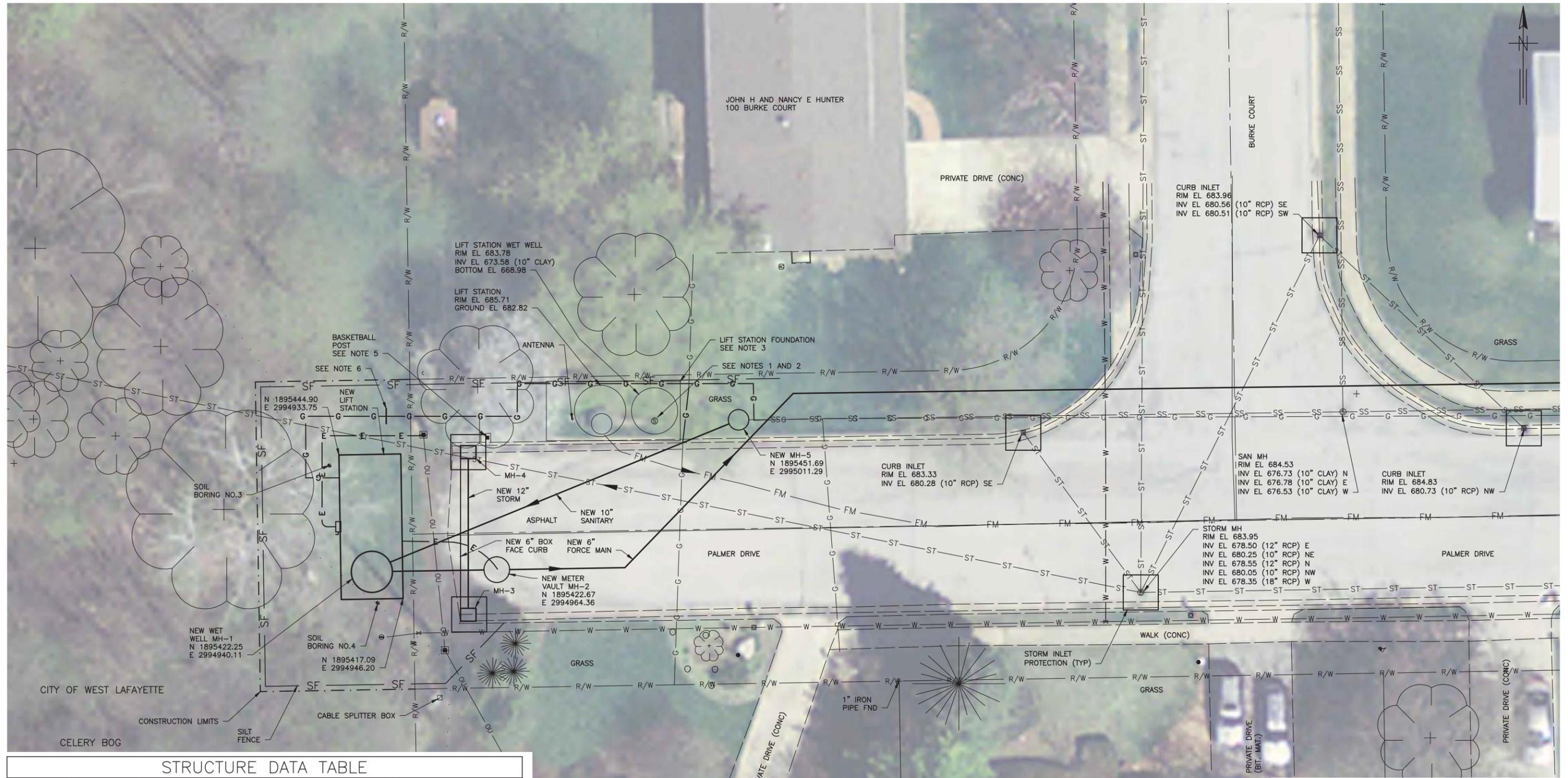
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CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
SITE PLAN
SHERATON LIFT STATION

FILE NAME	07910G05.DWG
DWG	5
SHEET	5 OF 24
DATE	APRIL 2014
REV	0

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STRUCTURE DATA TABLE							
MANHOLE NUMBER	TYPE	DIAMETER	APPROX GRADE ELEVATION	INLET SIZE	INVERT ELEVATION	OUTLET SIZE	INVERT ELEVATION
MH-1	WET WELL	96"	684.00	NEW 10" NE NEW 4" E	673.28 673.00	NEW 6" E	674.86
MH-2	METER VAULT	60"	684.00	NEW 6" W NEW 4" W	675.00 673.50	NEW 6" E	675.00
MH-3	CURB INLET	PER DETAIL	682.50	NEW 4" W	677.69	NEW 12" N	677.44
MH-4	CURB INLET	PER DETAIL	682.50	NEW 12" S EXISTING 18" E	677.15 676.67	EXISTING 18" W	676.67
MH-5	DOGHOUSE MANHOLE	48"	683.50	EXISTING 10" E	673.98	NEW 10" SW	673.48

- NOTES:**
- ONCE LIFT STATION IS DEMOLISHED, ESTABLISH NEW FLOW LINES IN WET WELL.
 - FIELD VERIFY INVERT OF EXISTING 10" SEWER AND PROVIDE TO ENGINEER PRIOR TO CORE DRILLING CONNECTION FOR NEW 10" SEWER.
 - LOCATION AND ORIENTATION OF LIFT STATION COMPONENTS (WET WELL, DRY WELL, ETC.) IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
 - REPLACE ROAD WAY WITH NEW ASPHALT PAVEMENT PER DETAILS.
 - PROTECT BASKETBALL POST. REMOVE AND REINSTALL IF NECESSARY.
 - VECTREN TO INSTALL GAS METER, REGULATOR, GAS LINE AND CAP PIPE AT APPROXIMATELY THIS LOCATION. CONTRACTOR TO INSTALL REMAINING GAS PIPING TO CONNECT TO LIFT STATION.

PLAN

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

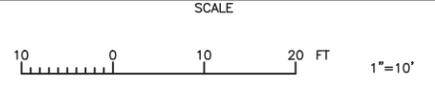
DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014

Joseph Jansch



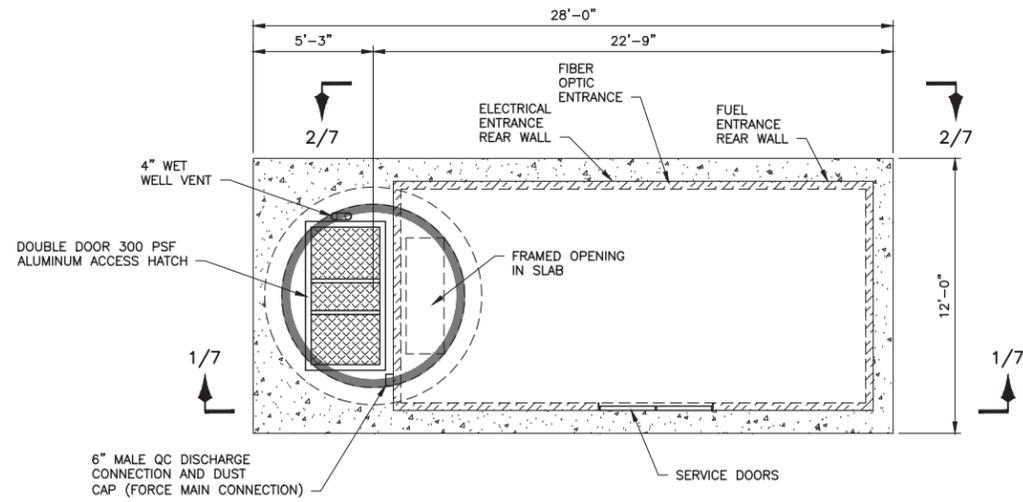
NO.	DATE	APPD	REVISION



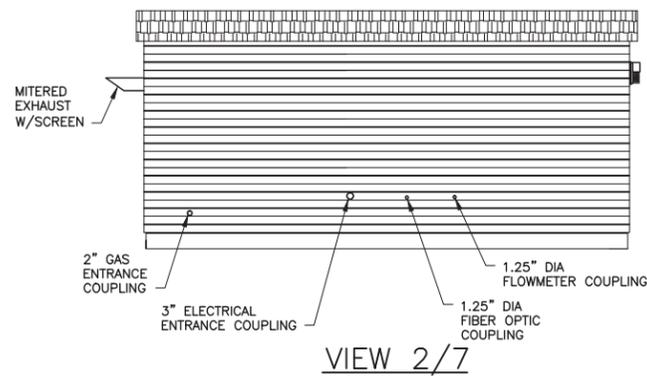
CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
SITE PLAN
FAIRWAY KNOLLS LIFT STATION

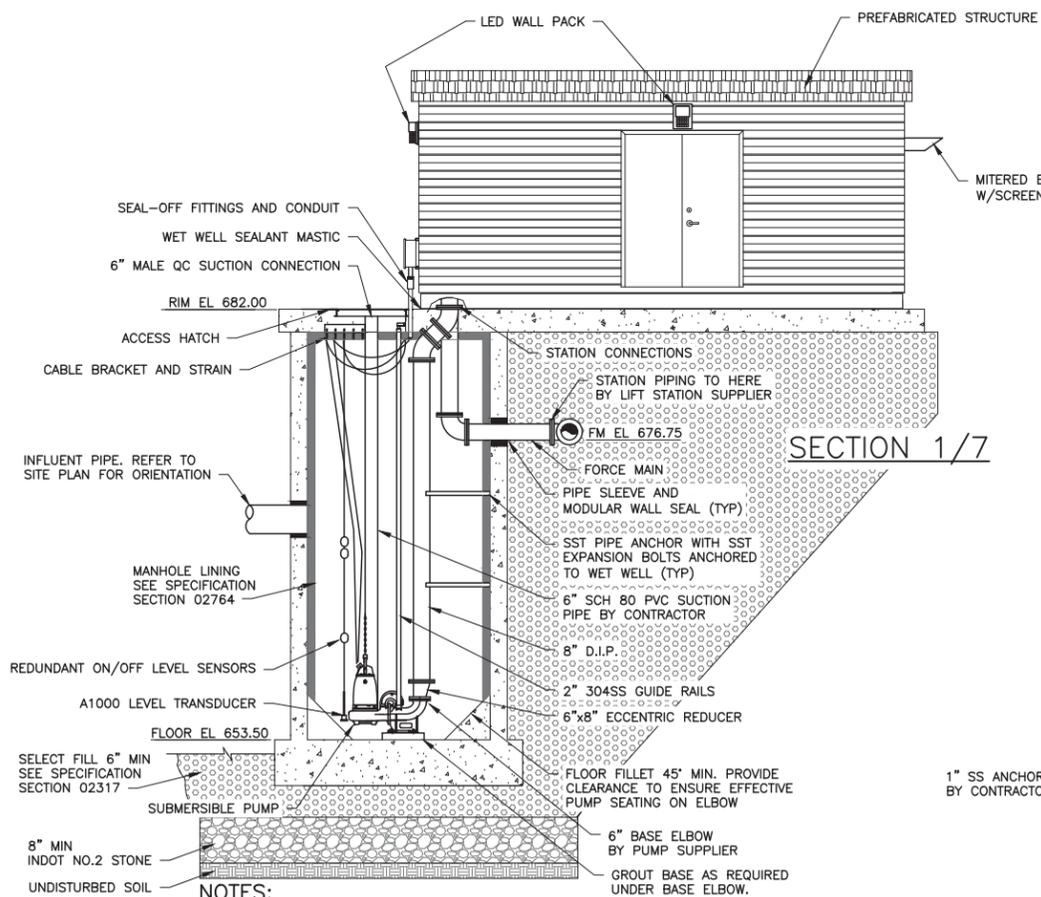
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DWG	6
SHEET	6 OF 24
DATE	APRIL 2014
REV	0



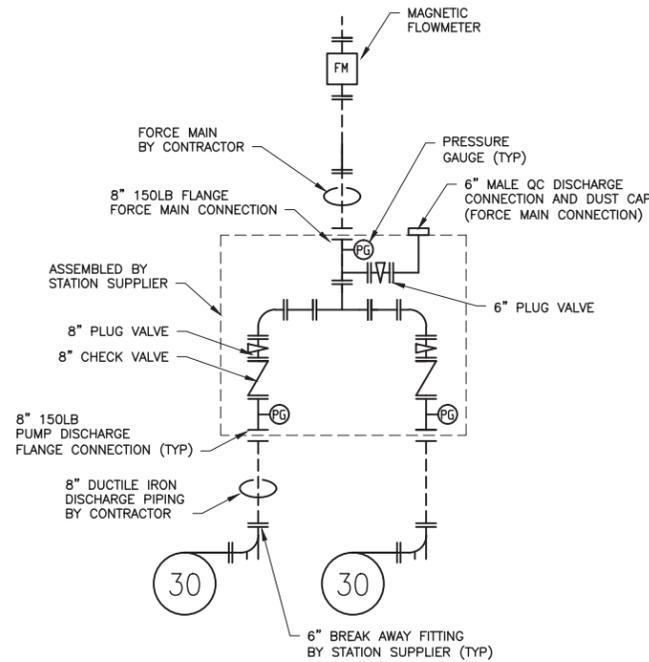
PLAN VIEW



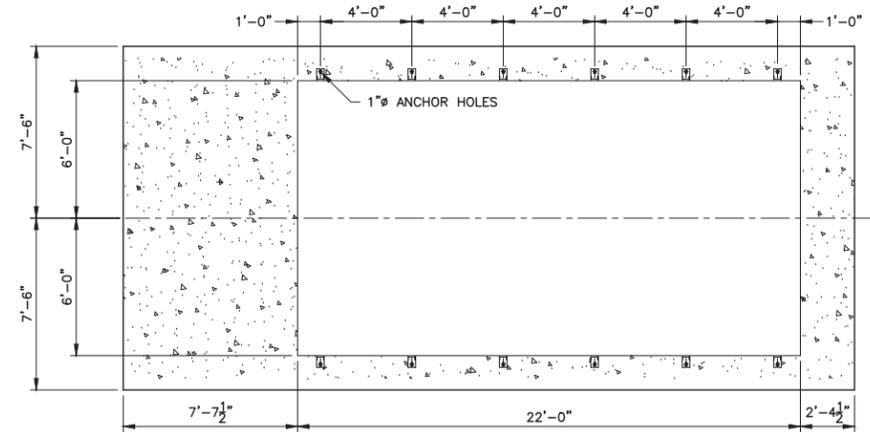
VIEW 2/7



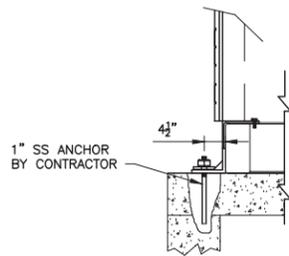
SECTION 1/7



PIPING SCHEMATIC



PLAN VIEW - STATION PLACEMENT



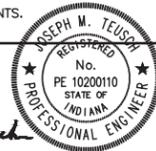
ANCHOR DETAIL

ELECTRICAL SERVICE		NATURAL GAS SERVICE	
AMPERAGE	200	LINE PRESSURE (lbs./sq.in.)	5
VOLTAGE	277/480	OPERATING PRESSURE (in. w.c.)	7-14" W.C.
PHASE	3	OPERATING VOLUME (cu.ft./hr.)	945
WIRE	3	NOTE: INSTALLING CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING FUEL REQUIREMENTS WITH GAS UTILITY. 5 LB. MIN. GAS SERVICE REQUIRED. MANUFACTURER TO SUPPLY SECONDARY REGULATOR FOR CONTRACTOR MOUNTING AFTER GAS METER.	
CYCLE	60		

SITE UTILITY REQUIREMENTS

NOTES:

1. WET WELL MANUFACTURER WILL GIVE WRITTEN CONFIRMATION THAT EACH REINFORCED PRECAST CONCRETE WET WELL SECTION CONTAINS THE SPECIFIED WATERPROOFING ADMIXTURE.
2. SEE SPECIFICATIONS FOR OPERATING LEVELS.
3. SEE DRAWINGS 19 AND 20 FOR SLAB REQUIREMENTS.



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

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DRAWN MJR
CHECKED JMT
APPROVED
SEAL AFFIXED
APRIL 25, 2014
Joseph Teusink

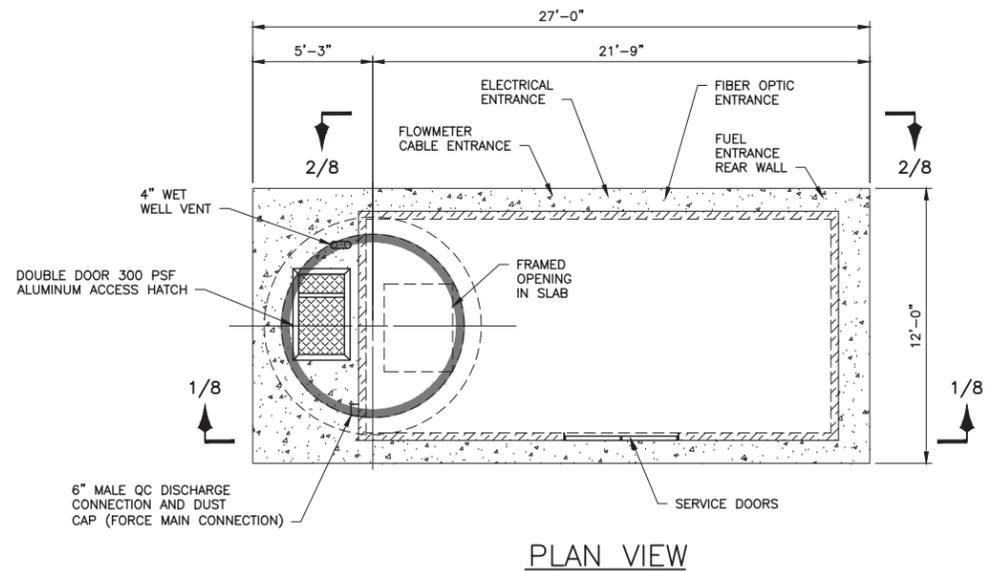
NO.	DATE	APPD	REVISION

SCALE
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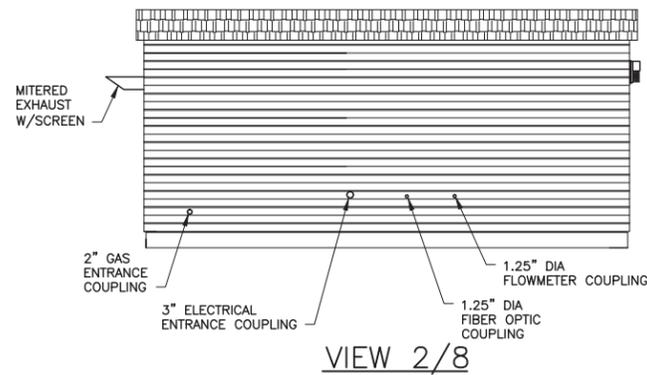
CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
NEW LIFT STATION
SHERATON

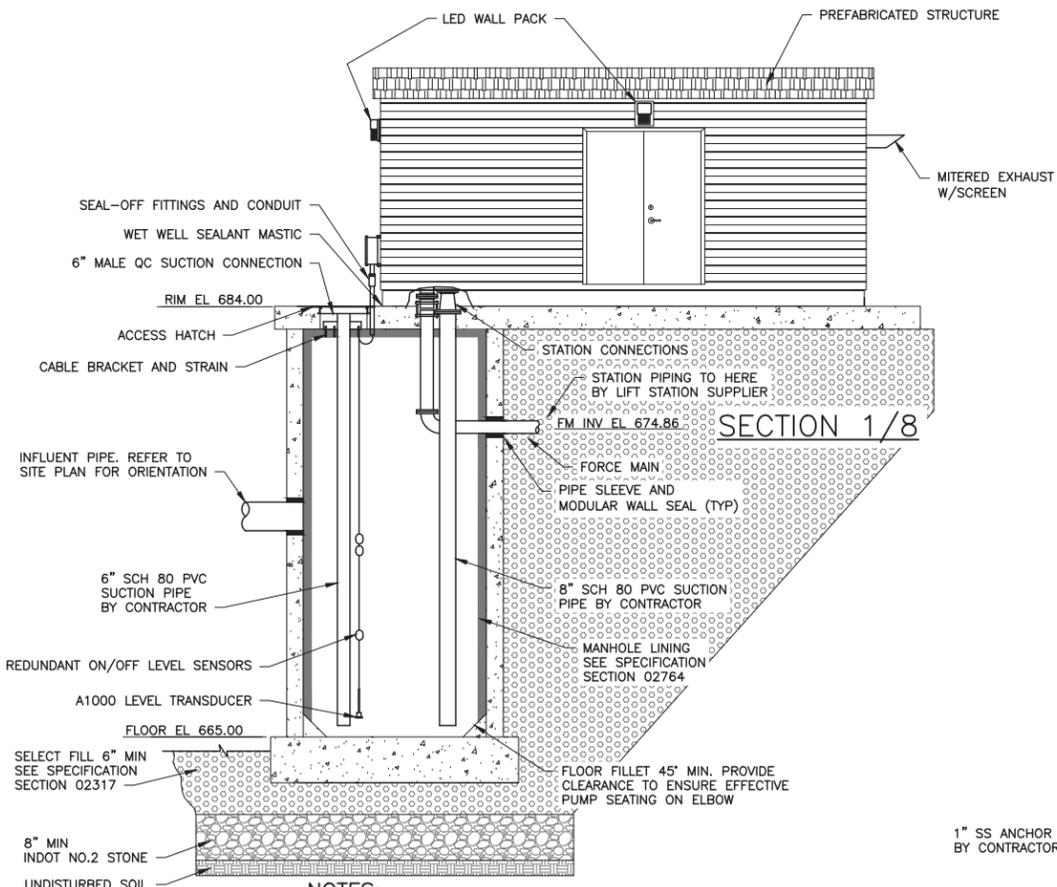
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DWG	7
SHEET	7 OF 24
DATE	APRIL 2014
REV	0



PLAN VIEW



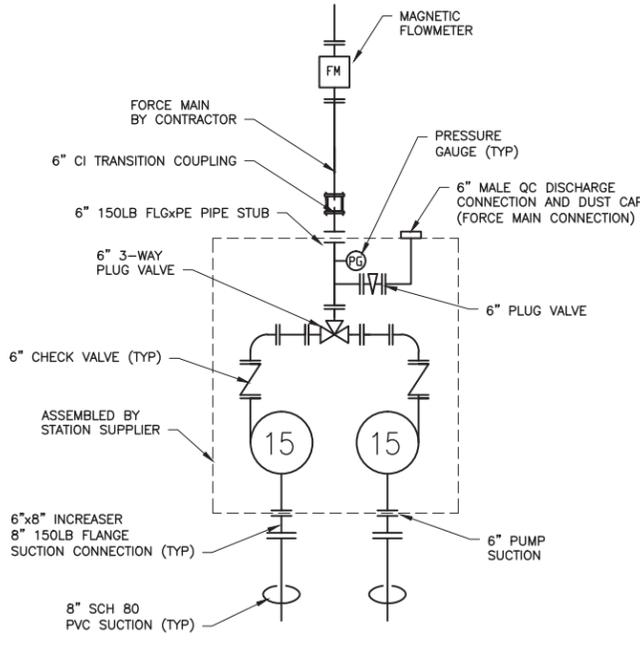
VIEW 2/8



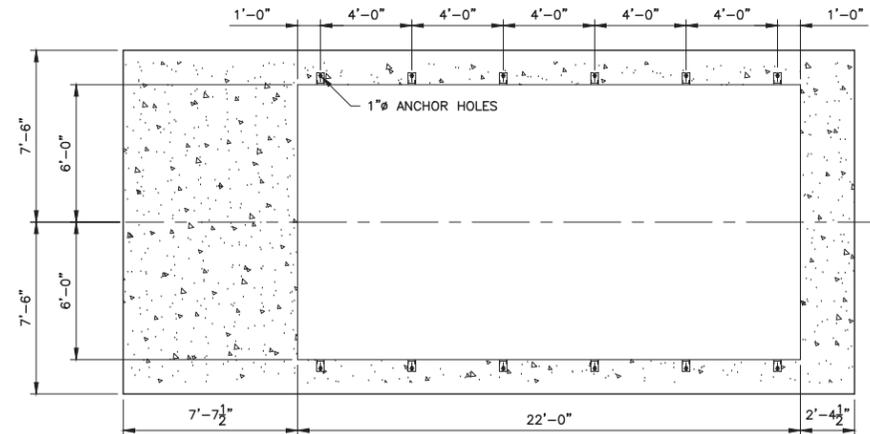
SECTION 1/8

NOTES:

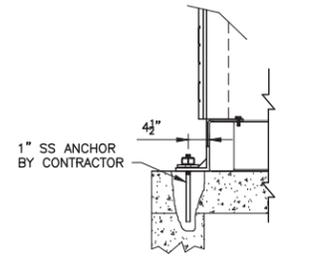
1. WET WELL MANUFACTURER WILL GIVE WRITTEN CONFIRMATION THAT EACH REINFORCED PRECAST CONCRETE WET WELL SECTION CONTAINS THE SPECIFIED WATERPROOFING ADMIXTURE.
2. SEE SPECIFICATIONS FOR OPERATING LEVELS.
3. SEE DRAWINGS 19 AND 20 FOR SLAB REQUIREMENTS.



PIPING SCHEMATIC



PLAN VIEW - STATION PLACEMENT



ANCHOR DETAIL

ELECTRICAL SERVICE		NATURAL GAS SERVICE	
AMPERAGE	200	LINE PRESSURE (lbs./sq.in.)	5
VOLTAGE	277/480	OPERATING PRESSURE (in. w.c.)	7-14" W.C.
PHASE	3	OPERATING VOLUME (cu.ft./hr.)	861
WIRE	3	NOTE: INSTALLING CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING FUEL REQUIREMENTS WITH GAS UTILITY. 5 LB. MIN. GAS SERVICE REQUIRED. MANUFACTURER TO SUPPLY SECONDARY REGULATOR FOR CONTRACTOR MOUNTING AFTER GAS METER.	
CYCLE	60		

SITE UTILITY REQUIREMENTS

FILE: J:\Projects\079111 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\079110G08 1:1 04/25/14 09:51 GH-H

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

DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014

Joseph Jausch



NO.	DATE	APPD	REVISION

SCALE
NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

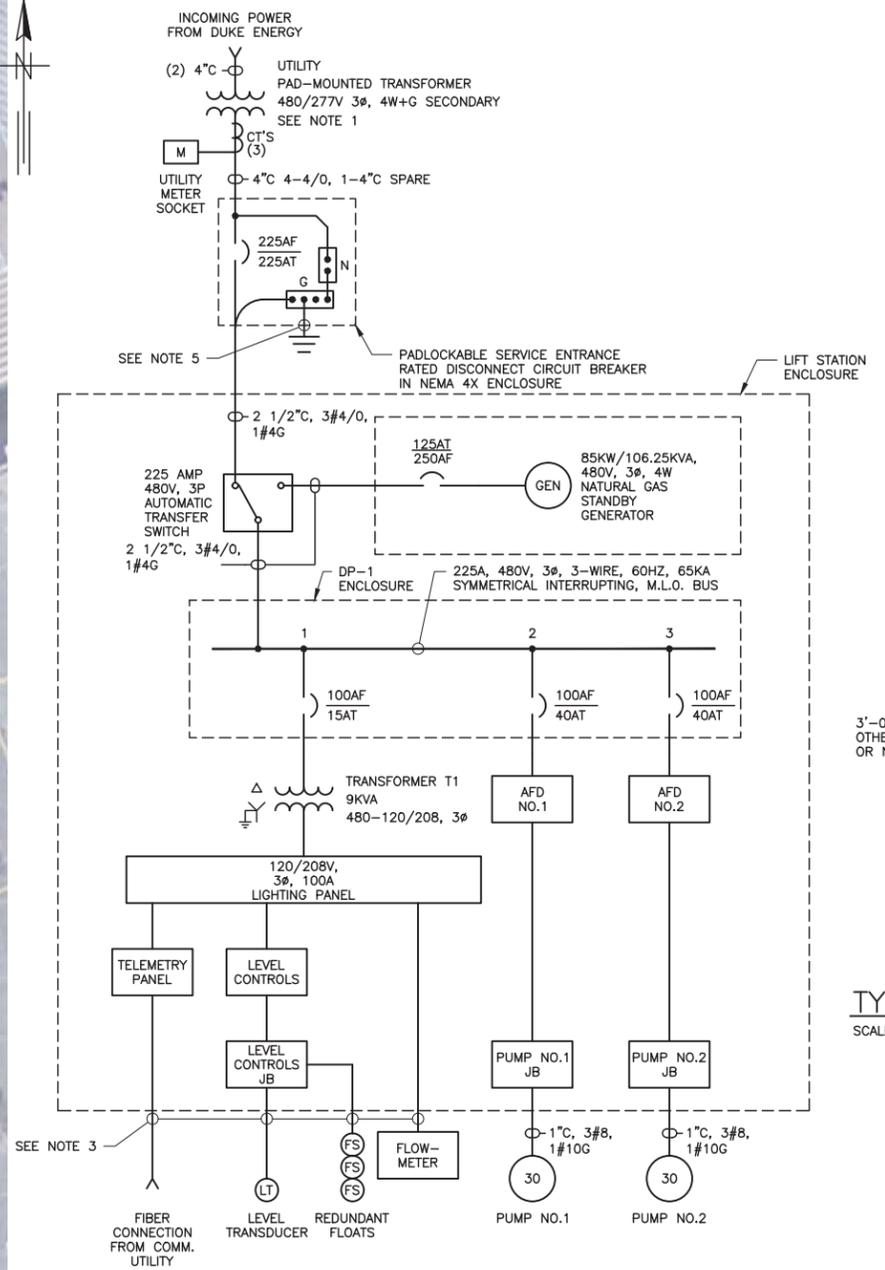
GENERAL
NEW LIFT STATION
FAIRWAY KNOLLS

FILE NAME	079110G08.DWG
DWG	8
SHEET	8 OF 24
DATE	APRIL 2014
REV	0

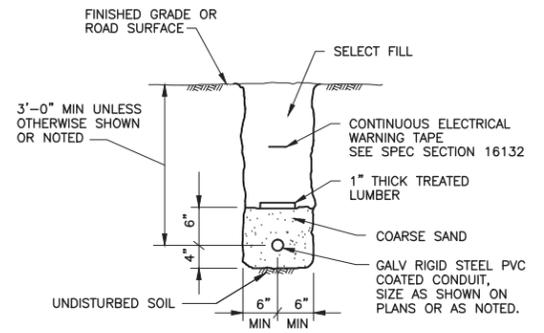
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SITE PLAN
SCALE: 1"=20'



OVERALL ONE LINE DIAGRAM

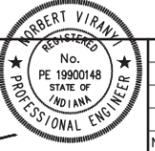


TYPICAL DIRECT BURIED CONDUIT DETAIL
SCALE: NOT TO SCALE

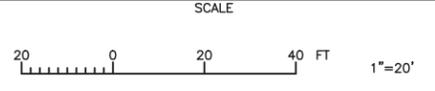
- NOTE:**
1. PROVIDE NEW ELECTRIC SERVICE, PAD AND APPURTENANCES TO PUMP STATION. COORDINATE ALL WORK WITH ELECTRIC UTILITY.
 2. COORDINATE AND SCHEDULE ALL TEMPORARY DISRUPTIONS OF ELECTRIC POWER TO THE LIFT STATION WITH OWNER. MAINTAIN POWER TO LIFT STATION AT ALL TIMES. PROVIDE TEMPORARY BACK-UP POWER OR GENERATOR DURING THE ELECTRIC SERVICE CHANGEOVER.
 3. PROVIDE WIRING IN 3/4" CONDUIT MINIMUM AS REQUIRED.
 4. PROVIDE NEW TRANSFORMER PAD IN COMPLIANCE WITH DUKE ENERGY REQUIREMENTS.
 5. PROVIDE A TRIANGULAR GROUND GRID W/3-3/4"x10' S.S. GROUND RODS EVENLY SPACED 10'-0" APART AND INTERCONNECTED W/4/0 BARE CU DIRECT BURIED CABLE.

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

DESIGNED JK
DRAWN TT
CHECKED NV
APPROVED
SEAL AFFIXED
APRIL 25, 2014



NO.	DATE	APPD	REVISION

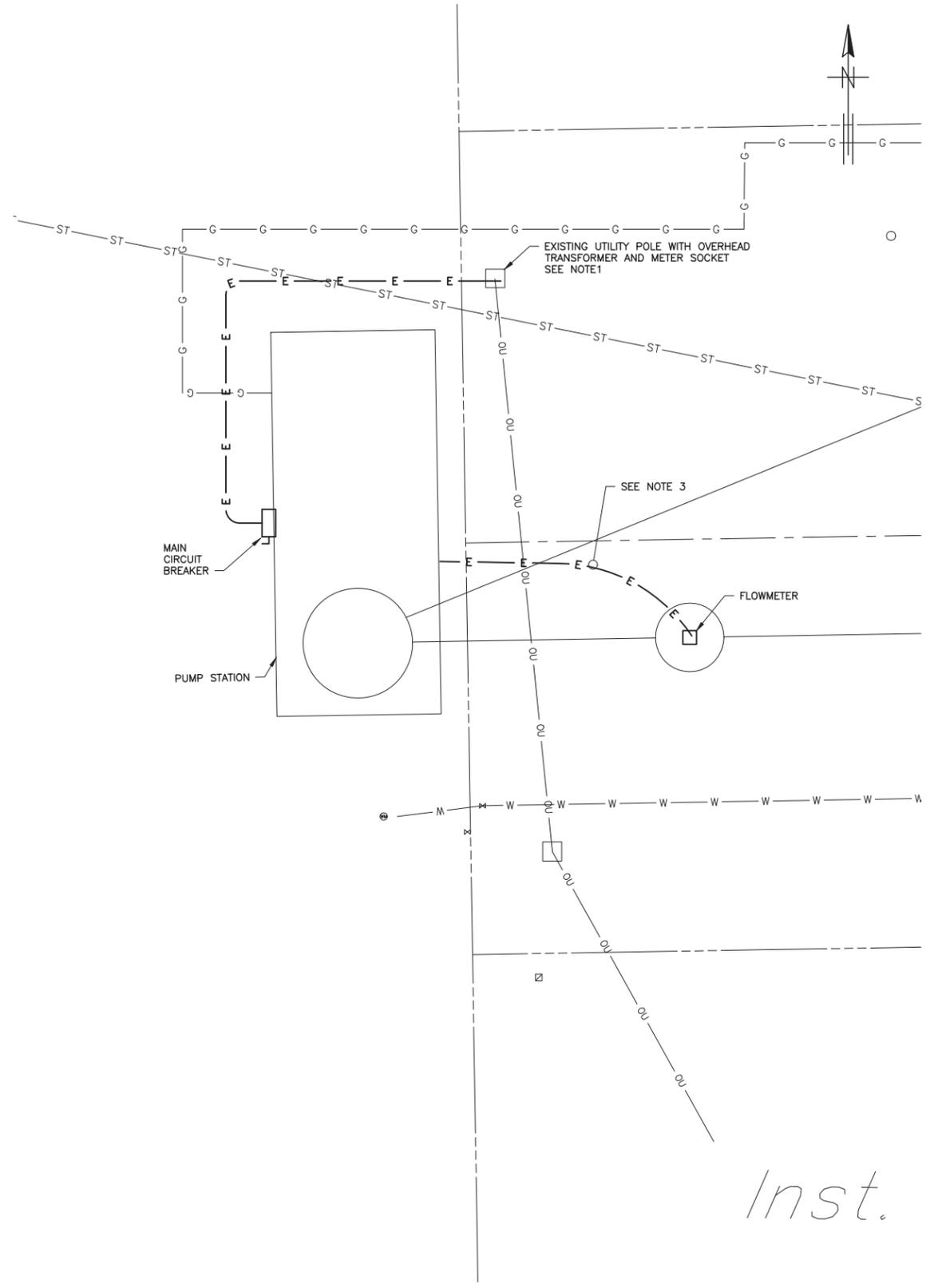


CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

ELECTRICAL
LIFT STATION
ONE LINE DIAGRAM AND PLAN
SHERATON

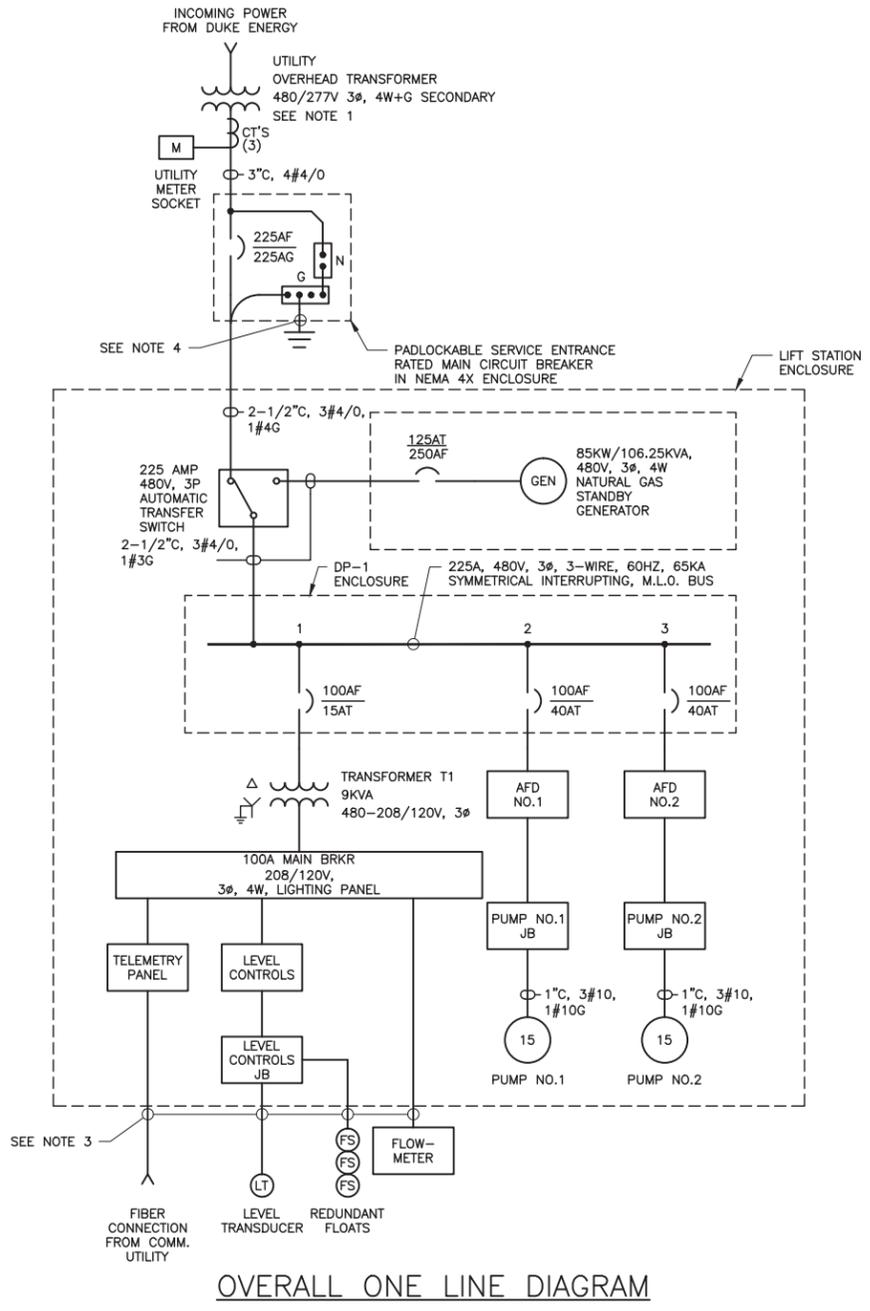
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DWG	9
SHEET	9 OF 24
DATE	APRIL 2014
REV	0

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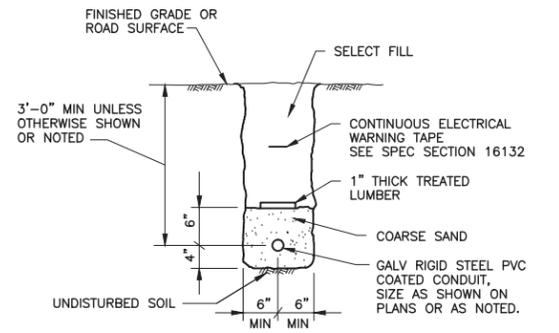


SITE PLAN
SCALE: 3/16"=1'-0"

Inst.



OVERALL ONE LINE DIAGRAM

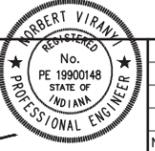


TYPICAL DIRECT BURIED CONDUIT DETAIL
SCALE: NOT TO SCALE

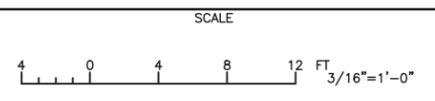
- NOTE:**
1. PROVIDE NEW METER SOCKET AND ROUTE CONDUIT TO PUMP STATION. COORDINATE ALL WORK WITH THE ELECTRICAL UTILITY.
 2. COORDINATE AND SCHEDULE ALL TEMPORARY DISRUPTIONS OF ELECTRIC POWER TO THE LIFT STATION WITH OWNER. MAINTAIN POWER TO LIFT STATION AT ALL TIMES. PROVIDE TEMPORARY BACK-UP POWER OR GENERATOR DURING THE ELECTRIC SERVICE CHANGEOVER.
 3. PROVIDE WIRING IN 3/4" CONDUIT MINIMUM AS REQUIRED.
 4. PROVIDE A TRIANGULAR GROUND GRID W/3-3/4"x10' S.S. GROUND RODS EVENLY SPACED 10'-0" APART AND INTERCONNECTED W/4/0 BARE CU DIRECT BURIED CABLE.

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

DESIGNED JK
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APRIL 25, 2014



NO.	DATE	APPD	REVISION

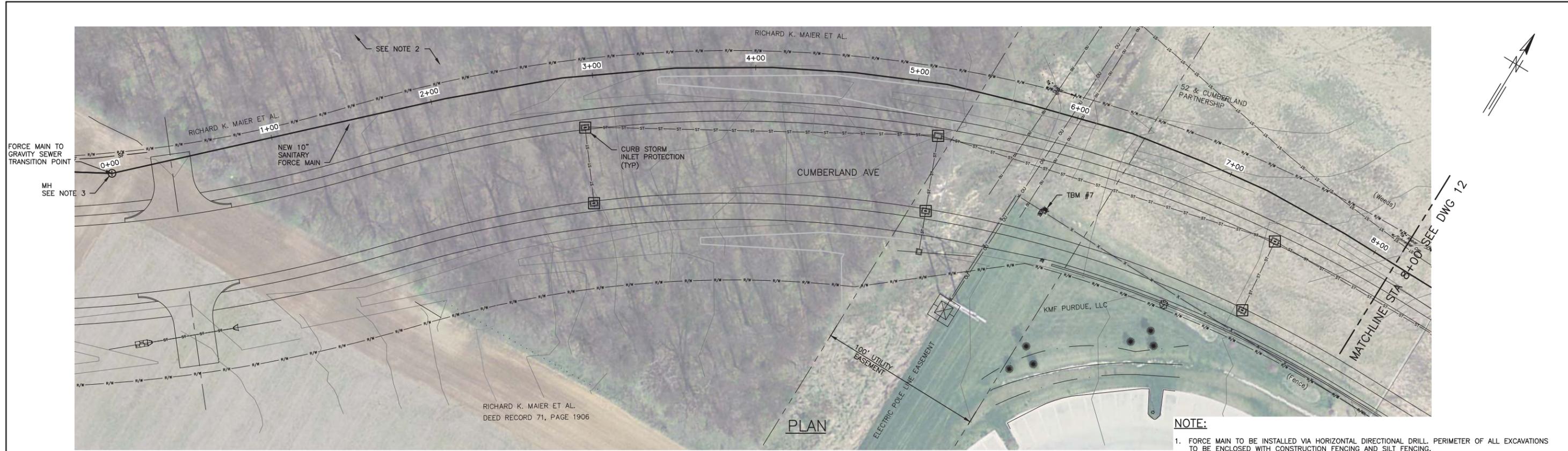


CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

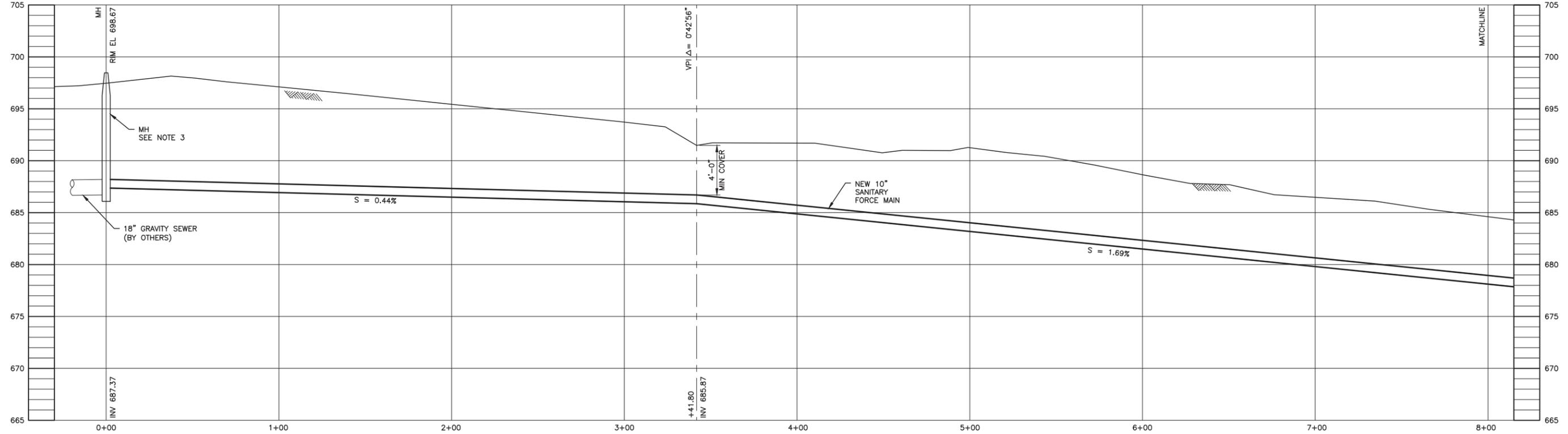
ELECTRICAL
LIFT STATION
ONE LINE DIAGRAM AND PLAN
FAIRWAY KNOLLS

FILE NAME	079110E10.DWG		
DWG	10		
SHEET	10	OF	24
DATE	APRIL 2014	REV	0

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\0791H0G11-15 1:1 04/24/14 13:55 GH-H



- NOTE:**
1. FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
 2. AERIAL DOES NOT REFLECT CURRENT CONDITIONS. WOODS HAVE BEEN CLEARED WITHIN RIGHT OF WAY.
 3. MANHOLE CONSTRUCTED BY OTHERS. INSTALL FORCEMAIN BY CORE DRILLING MANHOLE AND GROUT ANNULAR SPACE. MANHOLE TO BE LINED PER SPECIFICATION SECTION 02764. INSTALL BENCH AND FLOWLINES WITHIN MANHOLE.



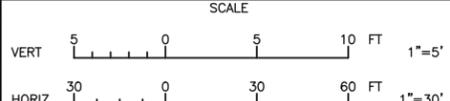
PROFILE

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

DESIGNED TSH
 DRAWN MJR
 CHECKED JMT



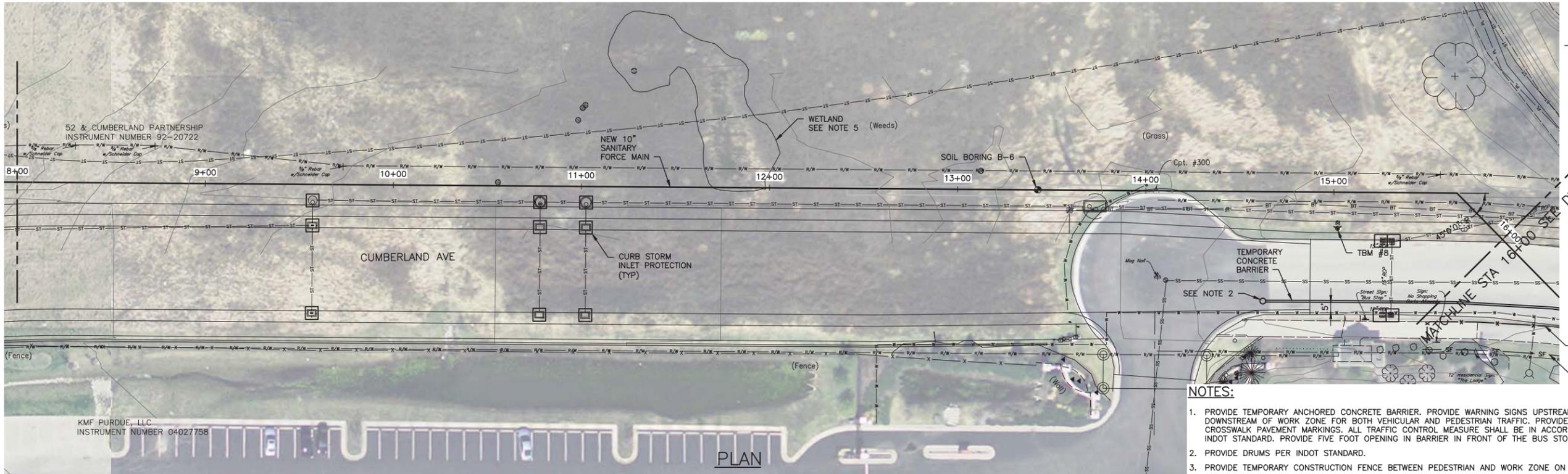
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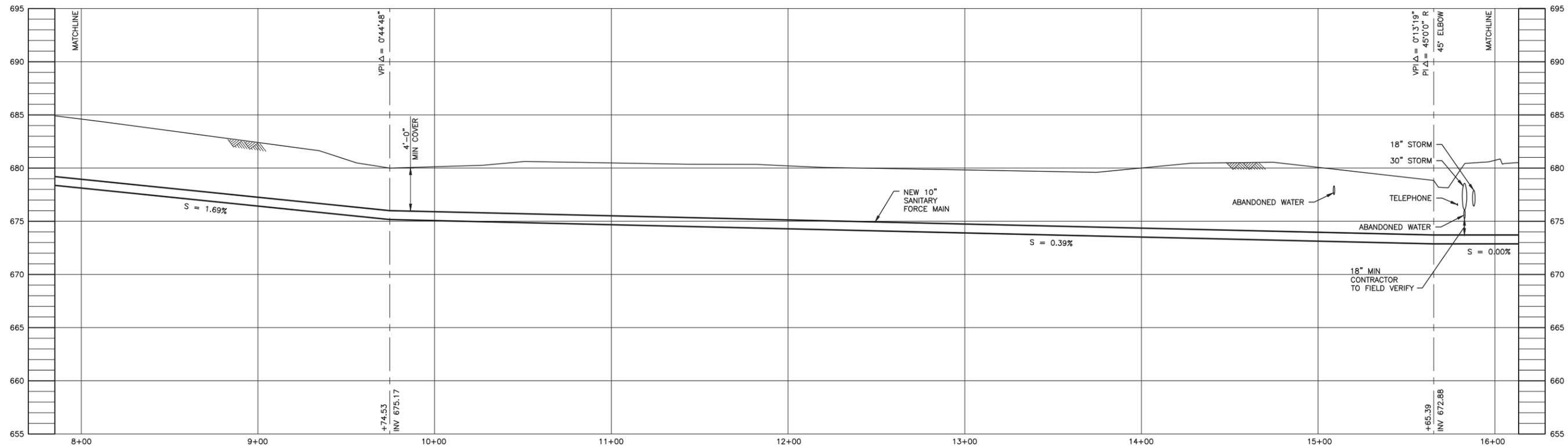
CITY OF WEST LAFAYETTE, INDIANA
 SHERATON AND FAIRWAY KNOLLS
 LIFT STATION IMPROVEMENTS

GENERAL
 PLAN AND PROFILE
 FORCE MAIN
 STA 0+00 TO STA 8+00

FILE NAME	0791H0G11-15.DWG
DWG	11
SHEET	11 OF 24
DATE	APRIL 2014
REV	0



- NOTES:**
1. PROVIDE TEMPORARY ANCHORED CONCRETE BARRIER. PROVIDE WARNING SIGNS UPSTREAM AND DOWNSTREAM OF WORK ZONE FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC. PROVIDE TEMPORARY CROSSWALK PAVEMENT MARKINGS. ALL TRAFFIC CONTROL MEASURE SHALL BE IN ACCORDANCE WITH INDOT STANDARD. PROVIDE FIVE FOOT OPENING IN BARRIER IN FRONT OF THE BUS STOP.
 2. PROVIDE DRUMS PER INDOT STANDARD.
 3. PROVIDE TEMPORARY CONSTRUCTION FENCE BETWEEN PEDESTRIAN AND WORK ZONE ON PATH.
 4. FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
 5. WETLAND NOT TO BE DISTURBED DURING CONSTRUCTION OF FORCE MAIN.
 6. POT-HOLE ALL LOCATIONS WHERE NEW FORCE MAIN CROSSES EXISTING UTILITIES PRIOR TO PERFORMING WORK. MAINTAIN A MINIMUM 18" CLEARANCE FROM UTILITIES.



PROFILE

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\2.05 Working Dwg\0791H0G11-15 1:1 04/28/14 10:18 GH-H

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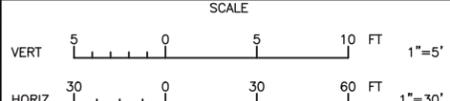
DESIGNED TSH
 DRAWN MJR
 CHECKED JMT

APPROVED
 SEAL AFFIXED
 APRIL 25, 2014

Joseph Jansch



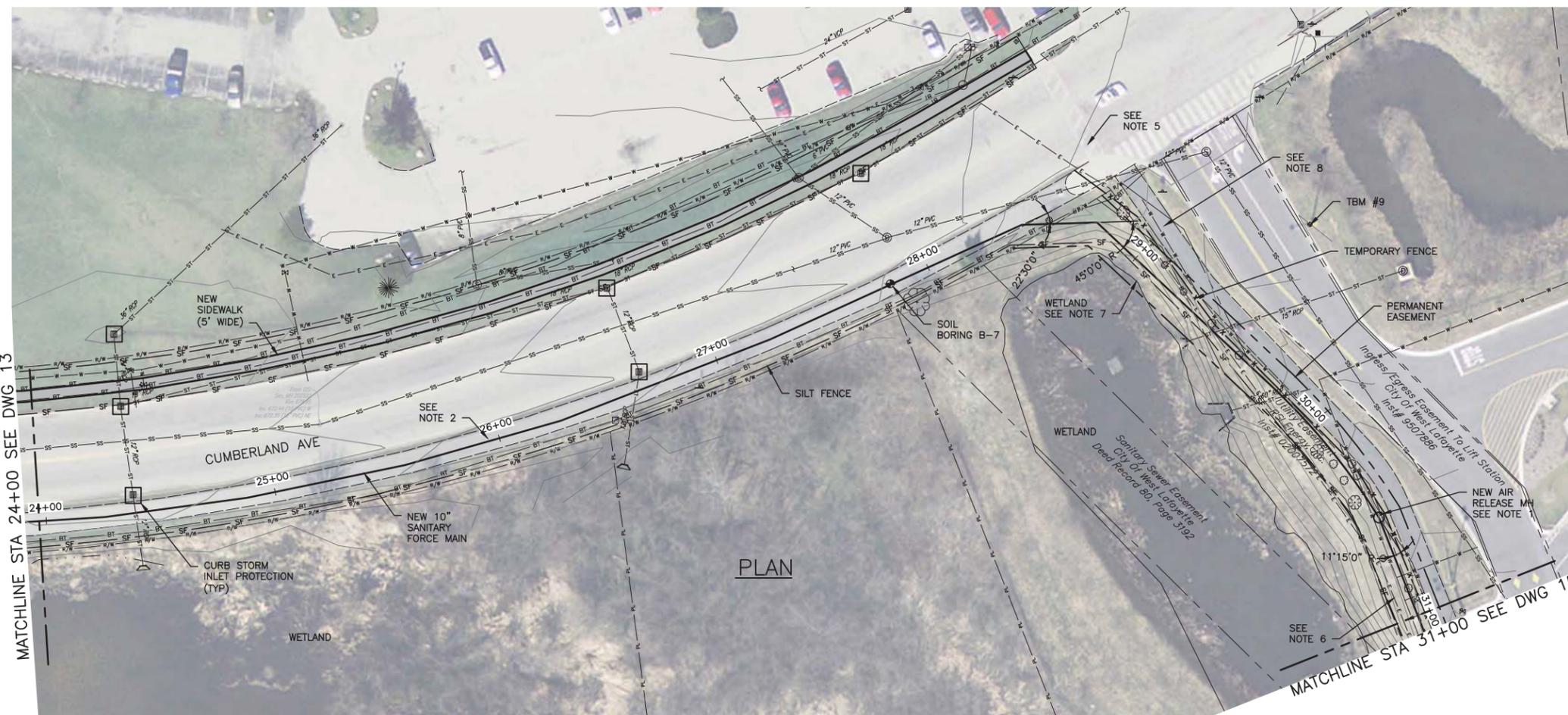
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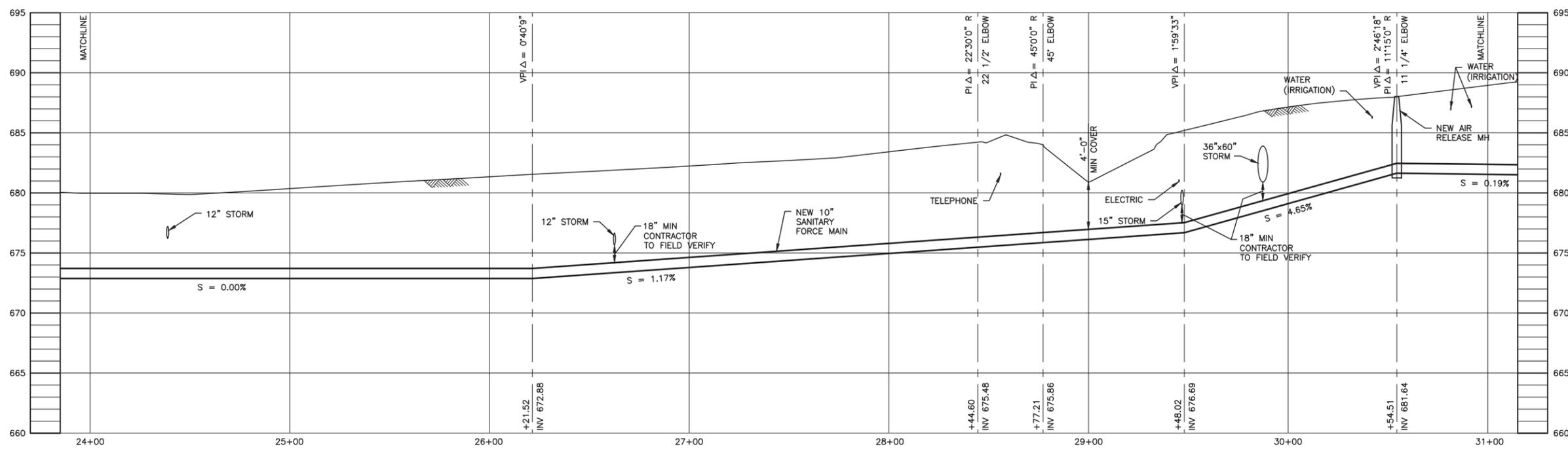
CITY OF WEST LAFAYETTE, INDIANA
 SHERATON AND FAIRWAY KNOLLS
 LIFT STATION IMPROVEMENTS

GENERAL
 PLAN AND PROFILE
 FORCE MAIN
 STA 8+00 TO STA 16+00

FILE NAME	0791H0G11-15.DWG
DWG	12
SHEET	12 OF 24
DATE	APRIL 2014
REV	0



- NOTES:**
1. RELOCATE IRRIGATION SYSTEM PIPING AS REQUIRED TO INSTALL MANHOLE. COORDINATE WITH SYSTEM OWNER.
 2. REPAIR HMA PATH WHERE DIRECTED BY OWNER. ONCE IDENTIFIED PATH SECTIONS HAVE BEEN REPAIRED PERFORM PATH RESTORATION PER DETAIL.
 3. FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
 4. PROVIDE TEMPORARY CONSTRUCTION FENCE BETWEEN WORK ZONE AND PATH.
 5. EXISTING CROSSWALK TO BE USED IN PEDESTRIAN DETOUR (SEE SPECIFICATION SECTION 01110).
 6. UNDERGROUND ELECTRIC CABLE IS THE MAIN FEED TO WAL-MART AND CANNOT BE DE-ENERGIZED AS IT IS A RADIAL FEED. POT-HOLE CROSSING LOCATIONS PRIOR TO PERFORMING THE WORK.
 7. WETLAND NOT TO BE DISTURBED DURING FORCE MAIN CONSTRUCTION.
 8. PATH TO REMAIN IN SERVICE DURING CONSTRUCTION. IF PATH IS DAMAGED DURING CONSTRUCTION REPAIR PER DETAIL.
 9. POT-HOLE ALL LOCATIONS WHERE NEW FORCE MAIN CROSSES EXISTING UTILITIES PRIOR TO PERFORMING WORK. MAINTAIN A MINIMUM 18" CLEARANCE FROM UTILITIES.



PROFILE

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\0791HOG11-15 1:1 04/28/14 10:21 GH-H

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

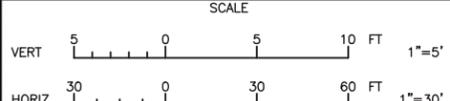
DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014

Joseph Jansch



NO.	DATE	APPD	REVISION

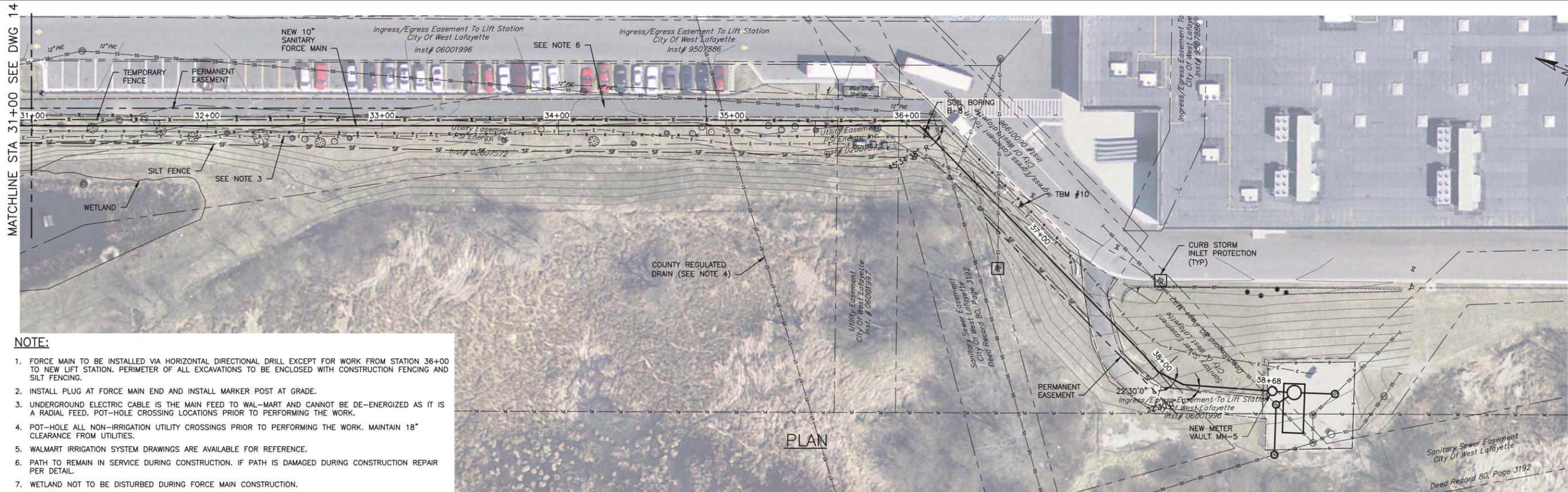


CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

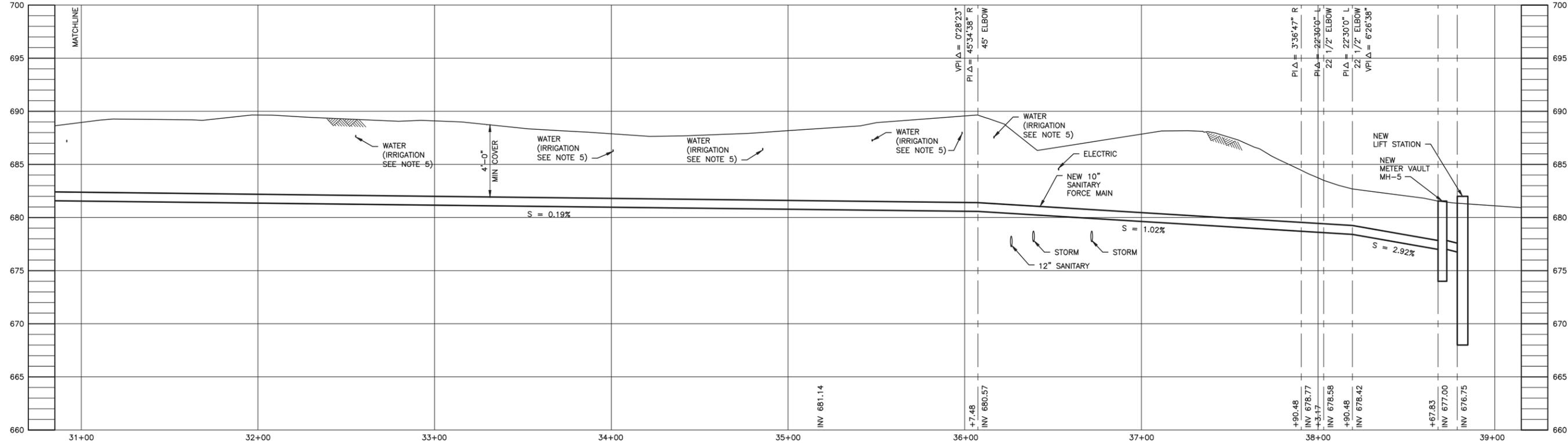
GENERAL
PLAN AND PROFILE
FORCE MAIN
STA 24+00 TO STA 31+00

FILE NAME	0791HOG11-15.DWG		
DWG	14		
SHEET	14	OF	24
DATE	APRIL 2014	REV	0

MATCHLINE STA 31+00 SEE DWG 14



- NOTE:**
- FORCE MAIN TO BE INSTALLED VIA HORIZONTAL DIRECTIONAL DRILL EXCEPT FOR WORK FROM STATION 36+00 TO NEW LIFT STATION. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
 - INSTALL PLUG AT FORCE MAIN END AND INSTALL MARKER POST AT GRADE.
 - UNDERGROUND ELECTRIC CABLE IS THE MAIN FEED TO WAL-MART AND CANNOT BE DE-ENERGIZED AS IT IS A RADIAL FEED. POT-HOLE CROSSING LOCATIONS PRIOR TO PERFORMING THE WORK.
 - POT-HOLE ALL NON-IRRIGATION UTILITY CROSSINGS PRIOR TO PERFORMING THE WORK. MAINTAIN 18" CLEARANCE FROM UTILITIES.
 - WALMART IRRIGATION SYSTEM DRAWINGS ARE AVAILABLE FOR REFERENCE.
 - PATH TO REMAIN IN SERVICE DURING CONSTRUCTION. IF PATH IS DAMAGED DURING CONSTRUCTION REPAIR PER DETAIL.
 - WETLAND NOT TO BE DISTURBED DURING FORCE MAIN CONSTRUCTION.
 - NEW GAS AND NEW ELECTRIC SERVICE LINES NOT SHOWN FOR CLARITY.
 - POT-HOLE ALL LOCATIONS WHERE NEW FORCE MAIN CROSSES EXISTING UTILITIES PRIOR TO PERFORMING WORK. MAINTAIN A MINIMUM 18" CLEARANCE FROM UTILITIES.



PROFILE

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\0791HOG11-15 1:1 04/28/14 10:27 GH-H

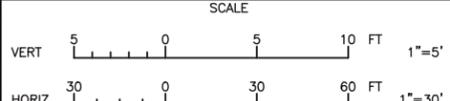
GREELEY AND HANSEN
7820 INNOVATION BOULEVARD, SUITE 150
INDIANAPOLIS, INDIANA 46278

DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014



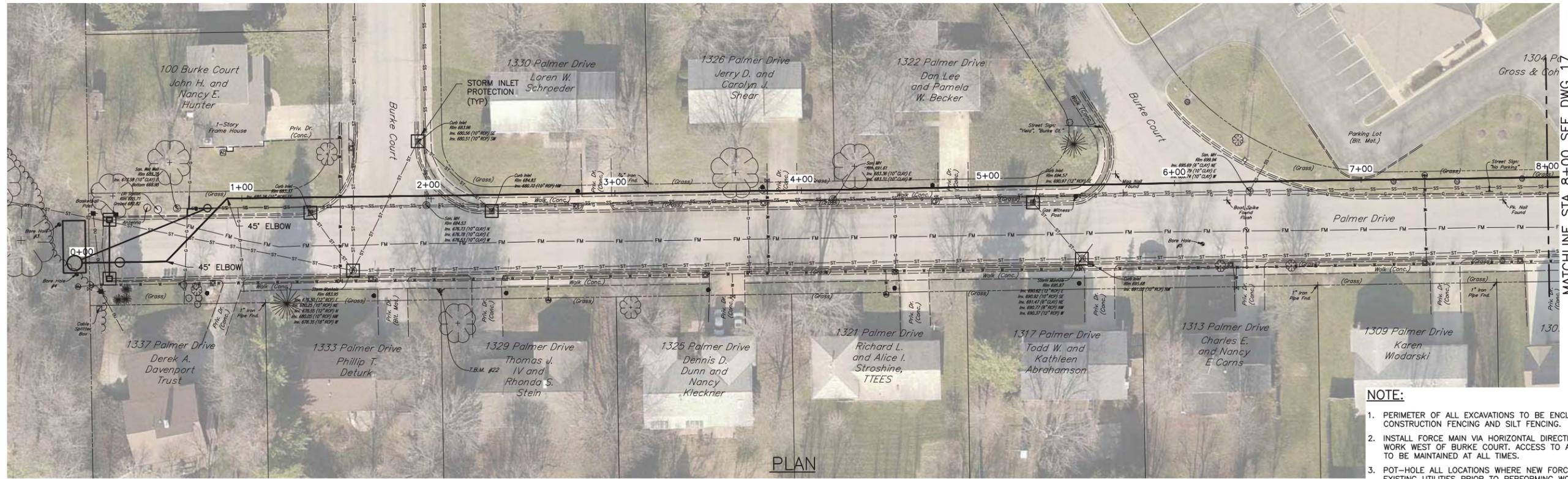
NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
PLAN AND PROFILE
FORCE MAIN
STA 31+00 TO STA 38+68

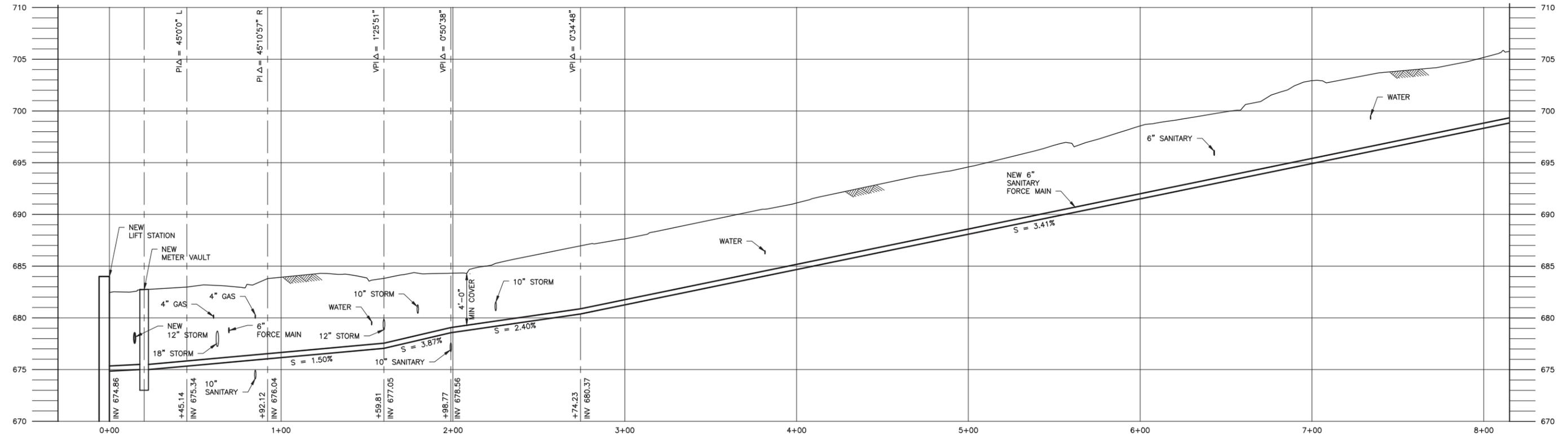
FILE NAME	0791HOG11-15.DWG
DWG	15
SHEET	15 OF 24
DATE	APRIL 2014
REV	0



MATCHLINE STA 8+00 SEE DWG 17

- NOTE:**
- PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
 - INSTALL FORCE MAIN VIA HORIZONTAL DIRECTIONAL DRILL EXCEPT FOR WORK WEST OF BURKE COURT. ACCESS TO ALL ROADS AND DRIVES IS TO BE MAINTAINED AT ALL TIMES.
 - POT-HOLE ALL LOCATIONS WHERE NEW FORCE MAIN CROSSES EXISTING UTILITIES PRIOR TO PERFORMING WORK. MAINTAIN A MINIMUM 18" CLEARANCE FROM UTILITIES.
 - NEW GAS AND NEW ELECTRIC SERVICE LINES NOT SHOWN FOR CLARITY.

PLAN



PROFILE

FILE: J:\Projects\07911 W Laf Sheraton LS\21 CADD\21.05 Working Dwg\079110616-18 1:1 04/28/14 15:01 GH-H

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7820 INNOVATION BOULEVARD, SUITE 150
INDIANAPOLIS, INDIANA 46278

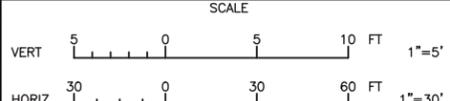
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APRIL 25, 2014

Joseph Jansch



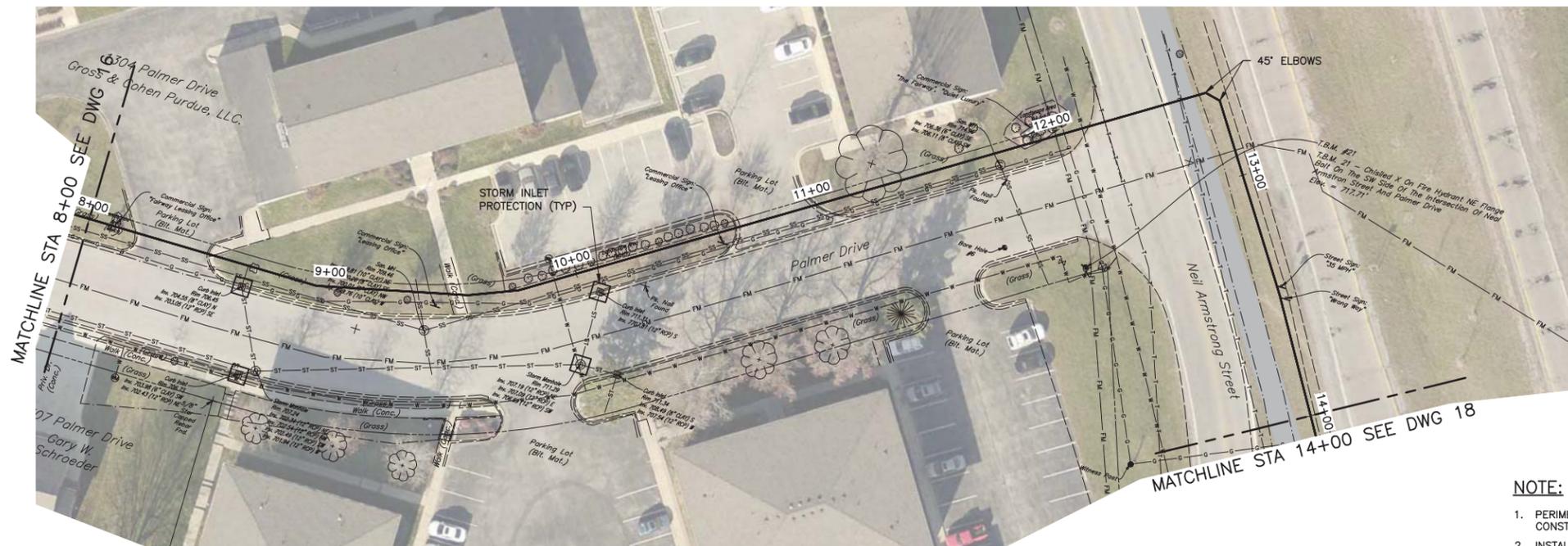
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CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

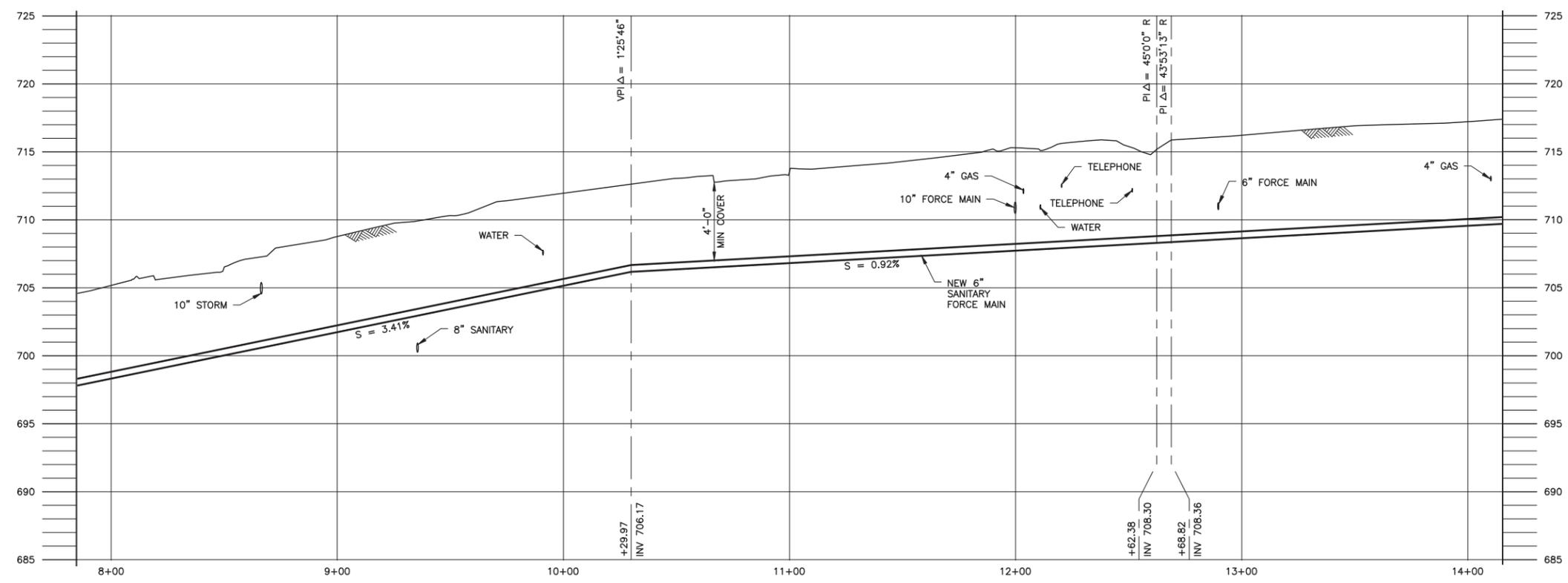
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DWG	16
SHEET	16 OF 24
DATE	APRIL 2014
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PLAN

- NOTE:**
1. PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
 2. INSTALL FORCE MAIN VIA HORIZONTAL DIRECTIONAL DRILL SUCH THAT ACCESS TO ALL ROADS, PATHS AND DRIVES IS MAINTAINED AT ALL TIMES. NEW TRAIL IS NOT TO BE DISTURBED.
 3. POT-HOLE ALL LOCATIONS WHERE NEW FORCE MAIN CROSSES EXISTING UTILITIES PRIOR TO PERFORMING WORK. MAINTAIN A MINIMUM 18" CLEARANCE FROM UTILITIES.



PROFILE

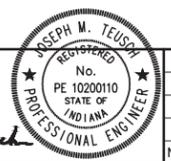
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GREELEY AND HANSEN
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 INDIANAPOLIS, INDIANA 46278

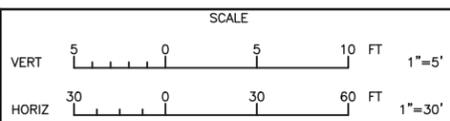
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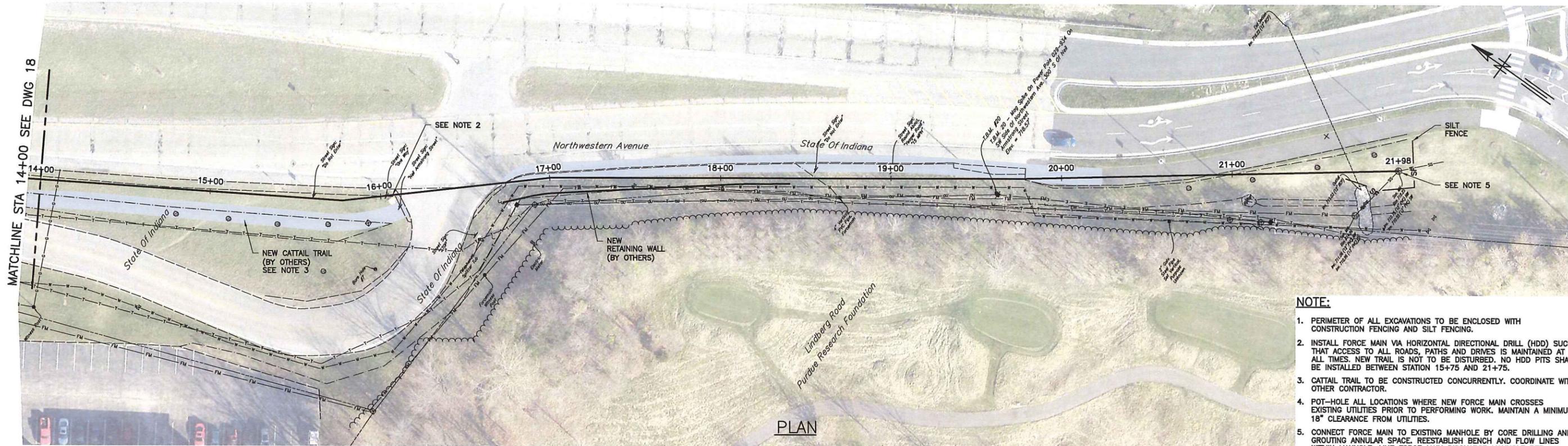
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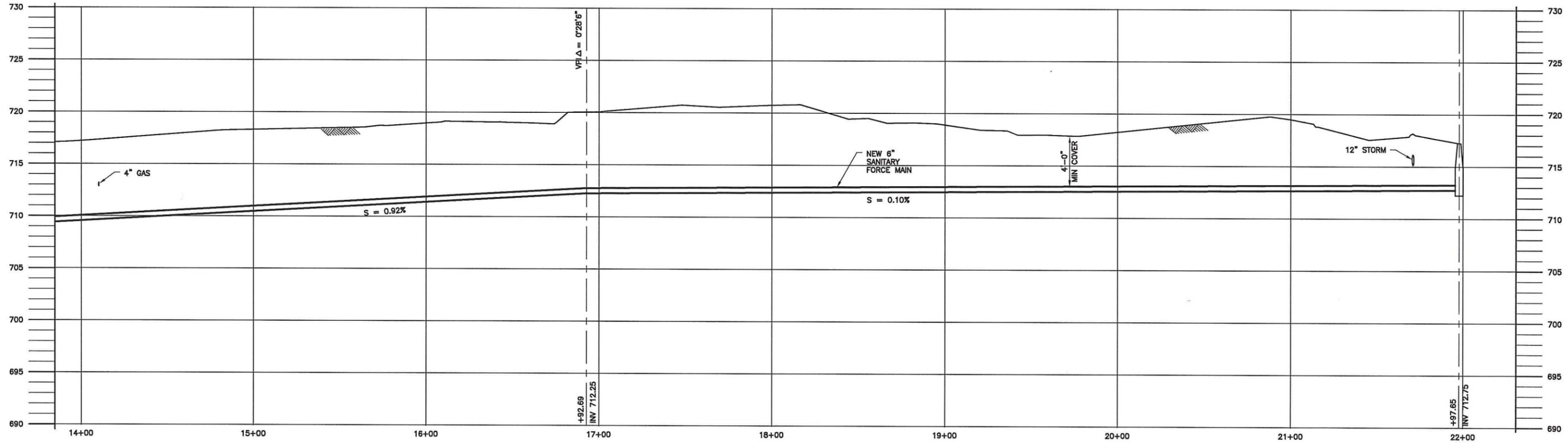
CITY OF WEST LAFAYETTE, INDIANA
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 LIFT STATION IMPROVEMENTS

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- NOTE:**
- PERIMETER OF ALL EXCAVATIONS TO BE ENCLOSED WITH CONSTRUCTION FENCING AND SILT FENCING.
 - INSTALL FORCE MAIN VIA HORIZONTAL DIRECTIONAL DRILL (HDD) SUCH THAT ACCESS TO ALL ROADS, PATHS AND DRIVES IS MAINTAINED AT ALL TIMES. NEW TRAIL IS NOT TO BE DISTURBED. NO HDD PITS SHALL BE INSTALLED BETWEEN STATION 15+75 AND 21+75.
 - CATTAIL TRAIL TO BE CONSTRUCTED CONCURRENTLY. COORDINATE WITH OTHER CONTRACTOR.
 - POT-HOLE ALL LOCATIONS WHERE NEW FORCE MAIN CROSSES EXISTING UTILITIES PRIOR TO PERFORMING WORK. MAINTAIN A MINIMUM 18" CLEARANCE FROM UTILITIES.
 - CONNECT FORCE MAIN TO EXISTING MANHOLE BY CORE DRILLING AND GROUTING ANNULAR SPACE. REESTABLISH BENCH AND FLOW LINES WITHIN MANHOLE. LINE FORCE MAIN DISCHARGE MANHOLE PER SPECIFICATION SECTION 02764.

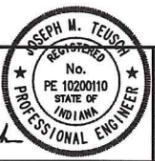


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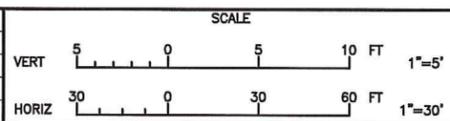
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INDIANAPOLIS, INDIANA 46278

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Joseph Jausch



NO.	DATE	APPD	REVISION



CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
PLAN AND PROFILE
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FILE NAME	07910G16-18.DWG
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GENERAL NOTES FOR PRE-FABRICATED BUILDING FOUNDATION

GENERAL NOTES FOR PRECAST WELLS AND WELL FOUNDATIONS

FOUNDATIONS

1. PLACEMENT AND COMPACTION OF ENGINEERED FILL SHALL BE OVERSEEN BY THE TESTING AGENCY. PLACE FILL MATERIAL IN LAYERS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS FOR THE 12 INCH COMPACTED GRANULAR MAT. MECHANICALLY COMPACT EACH LAYER TO AT LEAST THE REQUIRED MINIMUM DRY DENSITY.
2. FOR INFORMATION REGARDING SUBSURFACE CONDITIONS, REFER TO GEOTECHNICAL ENGINEERING INVESTIGATION REPORT, PREPARED BY PATRIOT ENGINEERING AND ENVIRONMENTAL, INC. DATED AUGUST 8, 2013. (PATRIOT PROJECT NUMBER 04-13-09B2) AND ADDENDUM NO. 1 DATED NOVEMBER 18, 2013 AND ADDENDUM NO. 2 DATED JANUARY 10, 2014.
3. SEE GEOTECHNICAL REPORT FOR UNDERCUTTING ANTICIPATED TO ACHIEVE THE SHALLOW MAT NET ALLOWABLE BEARING PRESSURE OF 1500 PSF.
4. DESIGN SHALLOW MAT FOUNDATION FOR MINIMUM DIFFERENTIAL SETTLEMENT WITH LIFT STATION WELL.
5. SEE GEOTECHNICAL REPORT FOR ALTERNATE INTERMEDIATE FOUNDATION OPTIONS FOR SHALLOW MAT FOUNDATION. (ADDENDUM NO. 1)
6. IT IS VERY IMPORTANT THAT THE TESTING AGENCY REPRESENTATIVE BE ON SITE TO MONITOR SOIL CONDITIONS.

REINFORCING STEEL

1. PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING STEEL IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-05), UNLESS OTHERWISE INDICATED.
2. REINFORCING STEEL SHALL BE SUPPORTED AND SECURED AGAINST DISPLACEMENT IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S "MANUAL OF STANDARD PRACTICE".
3. DETAILS OF REINFORCING STEEL FABRICATION AND PLACEMENT SHALL CONFORM TO ACI "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315) AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" (ACI 315R) UNLESS OTHERWISE INDICATED.
4. REINFORCING STEEL BENDS, HOOKS AND LAP SPLICES SHALL CONFORM TO THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-05) UNLESS OTHERWISE INDICATED.
5. PROVIDE STANDEES FOR THE SUPPORT OF TOP REINFORCEMENT FOR FOOTINGS.
6. FIELD BENDING OF REINFORCING STEEL IS PROHIBITED.
7. SUBMIT ALL REINFORCING STEEL FABRICATION DRAWINGS FOR REVIEW.

CONCRETE

1. THE MIXING, HANDLING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-05).
2. PROVIDE 3/4 INCH CHAMFERS ON EXPOSED CORNERS OF CONCRETE EXCEPT THOSE ABUTTING FLOOR SLABS.
3. FINISHING OF SLABS: AFTER SCREEDING, BULL FLOATING AND FLOATING OPERATIONS HAVE BEEN COMPLETED, APPLY FINAL FINISH AS INDICATED BELOW.
 - a. MAT FOUNDATION. NON-SLIP BROOM FINISH
4. FINISHING OF FORMED SURFACES: FINISH FORMED SURFACES AS INDICATED BELOW:
 - a. SIDES OF FOOTINGS. NONE
5. CURING OF SLABS: CURE SLABS WITH CURING COMPOUNDS OR MOISTURE RETENTION COVERS.
6. FINISH CONCRETE SLABS TO THE FOLLOWING F- NUMBERS:
FF = 25, FL = 20

COORDINATION WITH OTHER TRADES

1. THE CONTRACTOR SHALL COORDINATE AND CHECK ALL DIMENSIONS RELATING TO ARCHITECTURAL FINISHES, MECHANICAL OPENINGS, EQUIPMENT, ETC. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK IN THE AREA UNDER QUESTION.
2. MECHANICAL AND ELECTRICAL OPENINGS THROUGH CONCRETE SLABS LARGER THAN 6 INCHES IN DIAMETER, NOT SHOWN ON THE STRUCTURAL DRAWINGS, MUST BE APPROVED BY THE ARCHITECT/ENGINEER. OPENINGS 8 INCHES IN DIAMETER OR LESS SHALL HAVE AT LEAST 1'-0" CLEAR BETWEEN OPENINGS UNLESS APPROVED BY THE ARCHITECT/ENGINEER.
3. VERIFY DIMENSIONS AND LOCATIONS OF MECHANICAL AND ELECTRICAL OPENINGS THROUGH CONCRETE SLABS, SHOWN ON THE STRUCTURAL DRAWINGS, WITH THE MECHANICAL AND ELECTRICAL CONTRACTORS.
4. THE FOLLOWING CONNECTION COMPONENTS, TO BE EMBEDDED IN CONCRETE, ARE PROVIDED BY THE CONTRACTOR:
 - a. WELL ACCESS HATCH FRAME
 - b. ANCHOR BOLTS FOR PRE-FABRICATED BUILDING

COORDINATE THE SUPPLYING AND INSTALLATION OF THESE ITEMS SO THEY ARE CAST INTO THE NEW CONSTRUCTION.
5. DO NOT INSTALL CONDUIT IN SLABS.

CONCRETE SCHEDULE				
CLASS	28 DAY COMPRESSIVE STRENGTH	AIR CONTENT	CONCRETE PLACEMENT	REMARKS
C	4000 PSI	5% +/- 1%	SHALLOW MAT FOUNDATION AND EQUIPMENT PADS	MIDRANGE WATER REDUCING ADMIXTURE REQUIRED

DESIGN INFORMATION

GEOTECHNICAL

NET ALLOWABLE BEARING PRESSURE FOR SHALLOW MAT FOUNDATION = 1500 PSF

CONCRETE

SEE CONCRETE SCHEDULE FOR 28 DAY COMPRESSIVE STRENGTHS.

REINFORCING STEEL

REINFORCING BARS: ASTM A615, GRADE 60

DESIGN LIVE LOADS

LIFT STATION COVER SLAB = 100 PSF
ACCESS HATCHES = 300 PSF
PRE-FABRICATED STRUCTURE FLOOR SUPPORTED EQUIPMENT
SHERATON = 21,300 LBS
FAIRWAY = 20,800 LBS

DESIGN WIND LOADS

EXPOSURE C
90 MPH 3 SECOND WIND GUST VELOCITY
IMPORTANCE FACTOR = 1.00
PARTIALLY ENCLOSED BUILDING CRITERIA

DESIGN SEISMIC LOADS

A. OCCUPANCY CATEGORY III
B. IMPORTANCE FACTOR, I = 1.0
C. SEISMIC SITE CLASS:
SHERATON = SITE CLASS C
FAIRWAY = SITE CLASS C
D. Sds = 0.112 G (SHERATON)
E. Sd1 = 0.089 G (SHERATON)
F. Sds = 0.112 G (FAIRWAY)
G. Sd1 = 0.089 G (FAIRWAY)

CODE

2008 INDIANA BUILDING CODE
(2006 IBC WITH INDIANA AMENDMENTS)

STRUCTURAL DESIGN CRITERIA FOR SHERATON AND FAIRWAY LIFTSTATIONS PRECAST WELLS AND WELL FOUNDATIONS:

DESIGN CODES

1. 2008 INDIANA BUILDING CODE (IBC 2006 & ASCE 7-05)
2. ACI 350 CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING STRUCTURES

DESIGN LOADS

1. LIVE LOADS
 - A. LIFT STATION COVER SLAB.....100 PSF
 - B. ACCESS HATCHES.....300 PSF
 - C. PREFABRICATED STRUCTURE FLOOR SUPPORTED EQUIPMENT SHERATON..... = 21,300 LBS
FAIRWAY..... = 20,800 LBS
2. SEISMIC LOADS
 - A. OCCUPANCY CATEGORY III
 - B. IMPORTANCE FACTOR, I = 1.0
 - C. SEISMIC SITE CLASS:
SHERATON = SITE CLASS C
FAIRWAY..... = SITE CLASS C
 - D. SDS = 0.112 G (SHERATON)
 - E. SD1 = 0.089 G (SHERATON)
 - F. SDS = 0.112 G (FAIRWAY)
 - G. SD1 = 0.089 G (FAIRWAY)

GEOTECHNICAL INFORMATION

1. ALL FOUNDATION EXCAVATIONS SHALL HAVE BEARING LEVELS REVIEWED BY THE TESTING AGENCY TO CONFIRM CONFORMANCE WITH DESIGN ASSUMPTIONS BEFORE INSTALLING FOUNDATIONS. TESTING AGENCY SHALL APPROVE BACKFILL MATERIAL AND COMPACTION.
2. 100 YEAR FLOOD ELEVATIONS
 - A. SHERATON..... = 679.76 FT USGS
 - B. FAIRWAY..... = 679.76 FT USGS
3. EXISTING GRADE ELEVATIONS
 - A. SHERATON..... = 681 FT USGS
 - B. FAIRWAY..... = 683 FT USGS
4. LATERAL EARTH DESIGN PRESSURES
 - A. SOIL UNIT WEIGHT..... = 125 PCF (DRY)
 - B. SOIL UNIT WEIGHT = 63 PCF (BOUYANT)
 - C. AT-REST COEFFICIENT = 0.45
 - D. ACTIVE PRESSURE COEFFICIENT = 0.30
 - E. PASSIVE PRESSURE COEFFICIENT = 3.4 (SEE GEOTECHNICAL REPORT ON LIMITATIONS OF USING PASSIVE PRESSURE)
 - F. COEFFICIENT OF FRICTION = 0.3
 - G. MINIMUM FACTOR OF SAFETY AGAINST SLIDING = 1.5
 - H. HYDROSTATIC LATERAL PRESSURE SHALL BE CALCULATED BASED ON THE 100 YEAR FLOOD LEVEL AND ADDED TO LATERAL EARTH PRESSURE
 - I. ALL LATERAL EARTH PRESSURES SHALL INCLUDE 300 PSF SURCHARGE FROM THE PRE-FABRICATED BUILDING FOUNDATION.
 - J. ALL LATERAL EARTH PRESSURES ASSUME A CLEAN WELL-GRADED GRANULAR MATERIAL IS USED FOR BACKFILL. CONTACT GEOTECHNICAL ENGINEER FOR IF OTHER CONDITIONS ARE PRESENT.
 - K. SEE GEOTECHNICAL REPORT FOR CONSTRUCTION INFORMATION CONCERNING, EXCAVATION, BACKFILL, COMPACTION, DEWATERING, ETC...

DESIGN CONSIDERATIONS

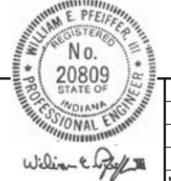
1. LEAK TEST WATER ELEVATIONS
 - A. SHERATON =682.00
 - B. FAIRWAY =684.00
 - C. DESIGN LOAD CASE; WATER CONTAINING STRUCTURES ARE FILLED WITH WATER TO LEAK TEST ELEVATION WITH NO BACKFILL
2. BOUYANCY
 - A. DESIGN WELL FOUNDATION TO RESIST BOUYANCY WHEN TANK IS EMPTY AND GROUND WATER AT 100 YEAR FLOOD ELEVATIONS
 - B. MINIMUM FACTOR OF SAFETY AGAINST BOUYANCY = 1.25
3. EXCAVATIONS SHALL NOT UNDERMINE ADJACENT FOUNDATIONS. PROVIDE SHEETING, SHORING, TIE-BACKS, UNDERPINNING, ETC... AS REQUIRED.
4. ALL CONSTRUCTION JOINTS IN WATER CONTAINING STRUCTURES SHALL HAVE PVC WATERSTOPS AND BE TREATED WITH CRYSTALLINE WATERPROOFING (DRY PACK AND SLURRY) IN ACCORDANCE WITH THE CRYSTALLINE WATERPROOFING MANUFACTURER'S RECOMMENDATIONS.
5. PRECAST CONCRETE SUPPLIER SHALL DESIGN 8"-11" INSIDE DIAMETER PRECAST WELLS AND WELL FOUNDATIONS IN ACCORDANCE WITH DESIGN CRITERIA GIVEN HERE.

CONCRETE MIX DESIGN FOR WATER CONTAINING STRUCTURES

1. MINIMUM 28 DAY COMPRESSION STRENGTH = 4000 PSI
2. MAXIMUM WATER TO CEMENT RATIO = 0.45
3. MINIMUM CEMENTITIOUS MATERIAL CONTENT = 564 LBS PER CY
4. MINIMUM OF 20% OF CEMENTITIOUS MATERIAL SHALL BE FLYASH MEETING ASTM C 618 CLASS C
5. CONCRETE SHALL NOT BE HAVE CEMENT OR ADMIXTURES THAT ACCELERATE THE SET TIME.
6. CONCRETE SHALL BE AIR ENTRAINED = 6% (PLUS OR MINUS 1%)
7. CONCRETE SHALL HAVE CORROSION INHIBITING ADMIXTURE AT 0.5 GALLONS PER CY; STANDARD: DCI BY W.R. GRACE AND CO

EXISTING CONSTRUCTION

1. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS BEFORE PROCEEDING WITH NEW CONSTRUCTION. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK IN THE AREA UNDER QUESTION.
2. PREVENT UNDERMINING OF THE FOUNDATIONS OF EXISTING STRUCTURES, BY PROVIDING UNDERPINNING, SHORING, BRACING, SHEETING TAKING PROTECTIVE MEASURES TO PREVENT DAMAGE TO THE EXISTING CONSTRUCTION AND TO ENSURE THAT THERE IS NO VERTICAL OR HORIZONTAL MOVEMENT.
 - a. UNDERPIN IN ALTERNATING INCREMENTS SMALL ENOUGH TO ALLOW THE EXISTING FOUNDATIONS TO BRIDGE THE GAPS CREATED BY THE REQUIRED EXCAVATION.
 - b. CAREFULLY MONITOR THE EXISTING CONSTRUCTION ADJACENT TO THE UNDERPINNING, SHORING, BRACING, SHEETING OPERATION FOR SETTLEMENT.
 - c. SUBMIT TO THE ARCHITECT/ENGINEER THE UNDERPINNING, SHORING, BRACING, SHEETING DESIGN, PREPARED BY A REGISTERED PROFESSIONAL ENGINEER FOR REVIEW. INCLUDE AN OUTLINE PROCEDURE AND PERTINATE DETAILS OF THE OPERATION.



GREELEY AND HANSEN
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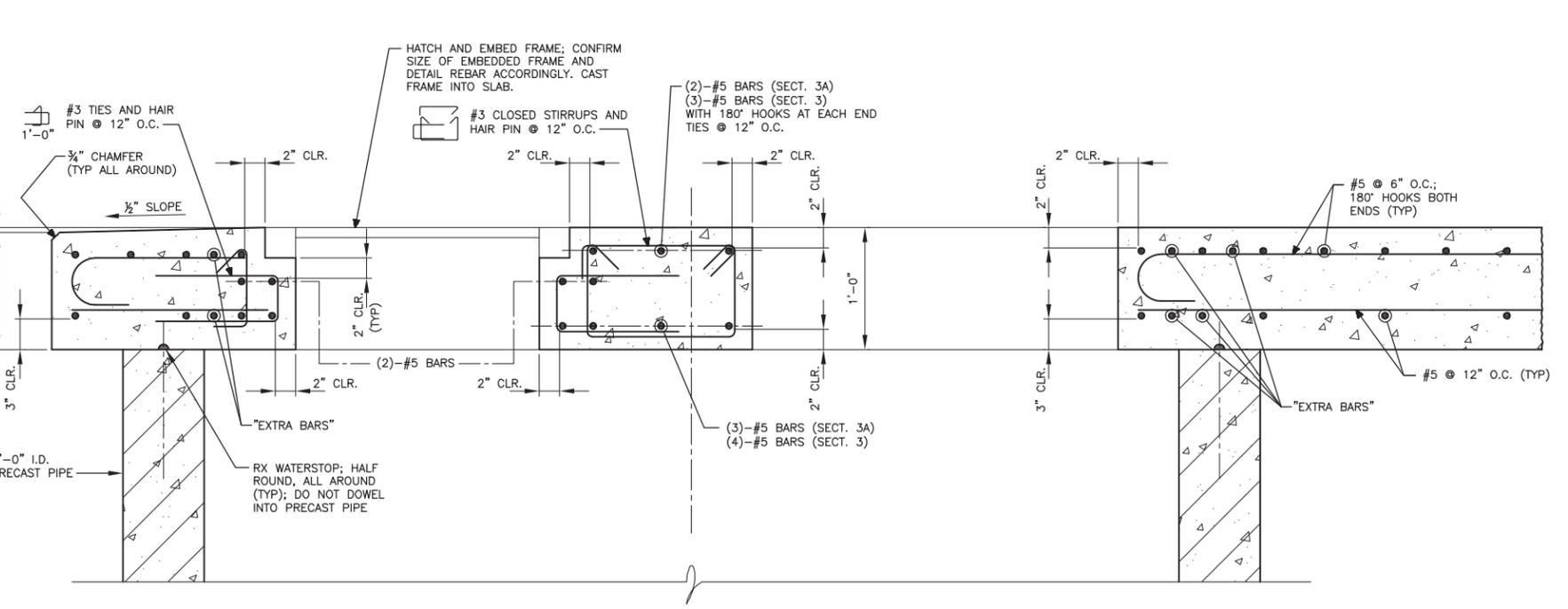
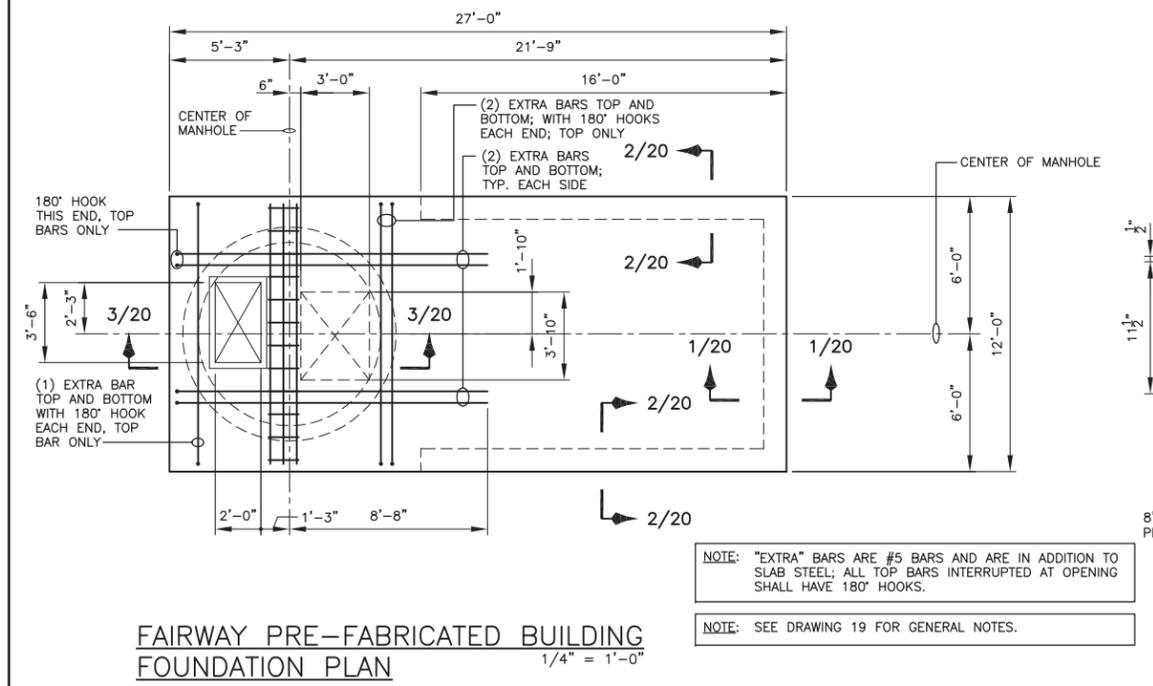
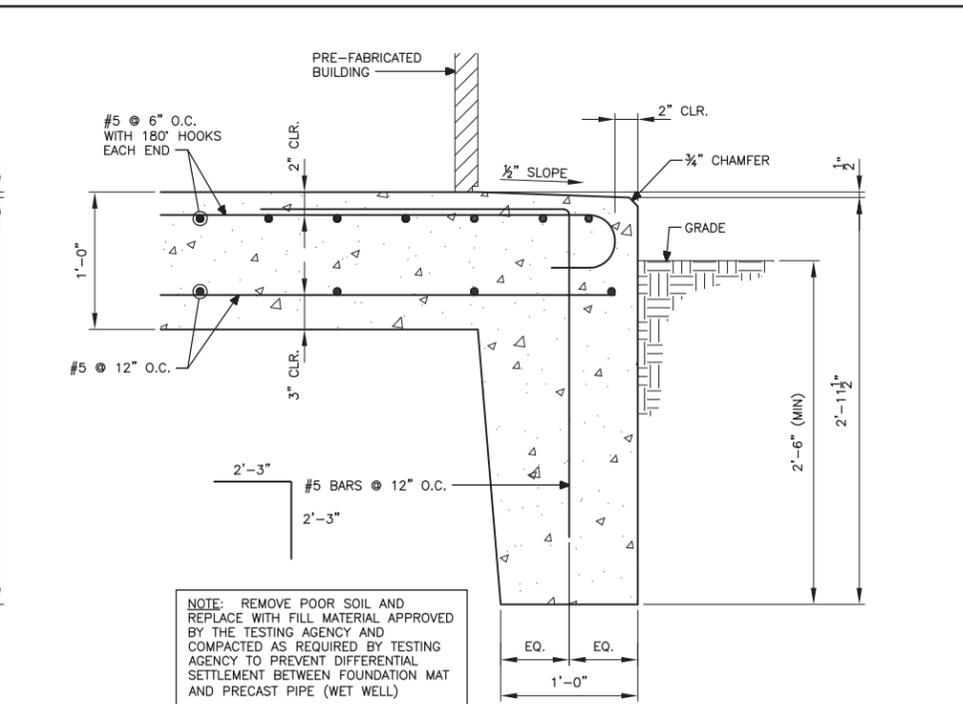
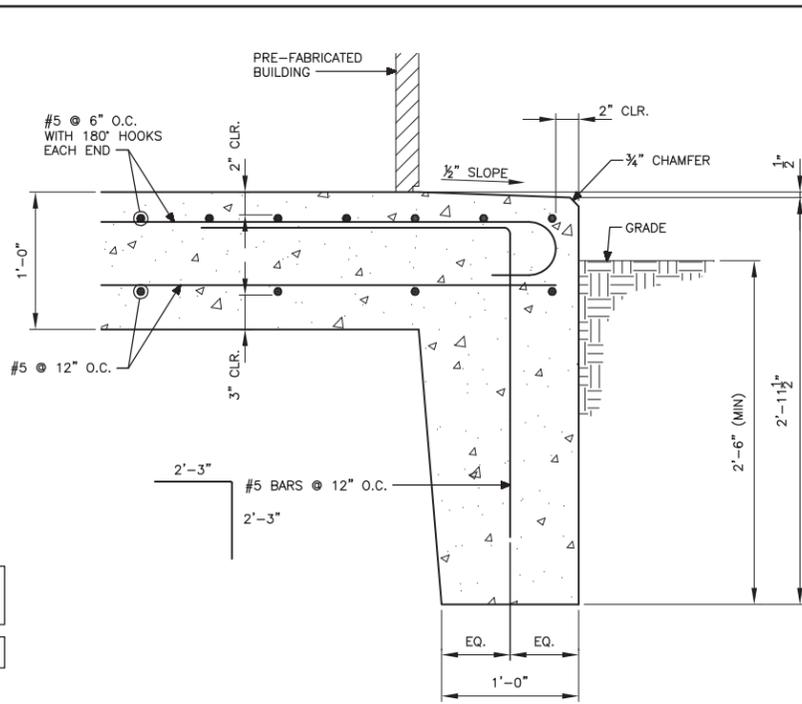
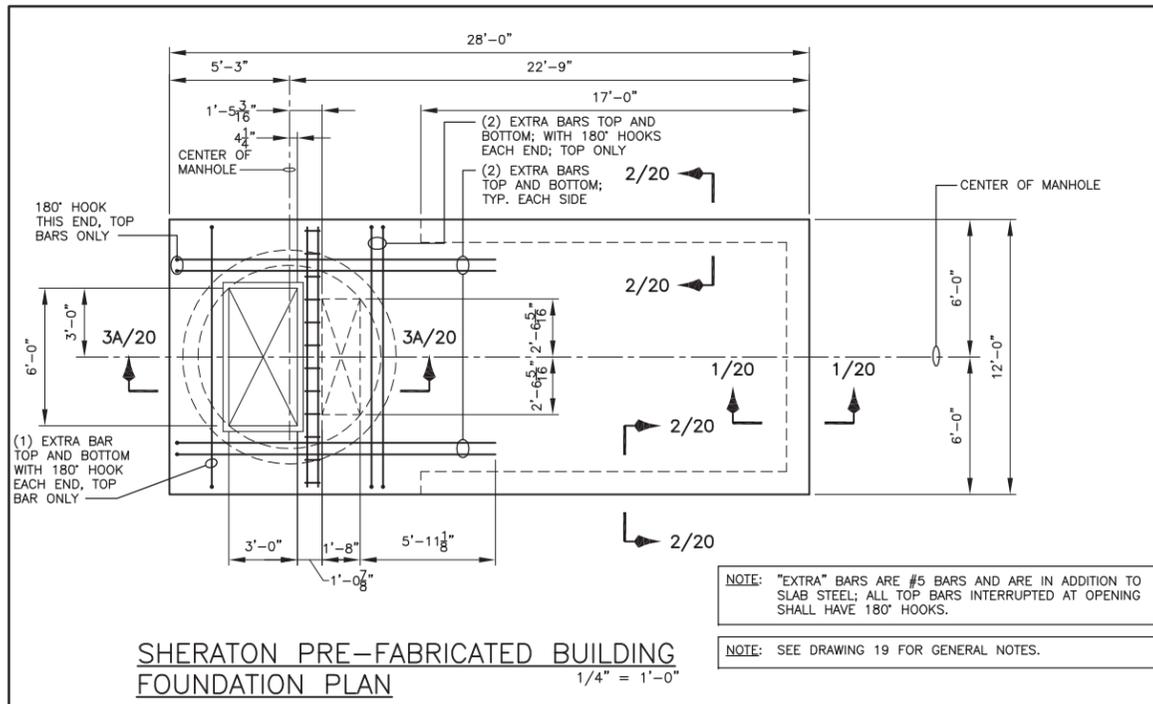
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WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY
LIFT STATION IMPROVEMENTS

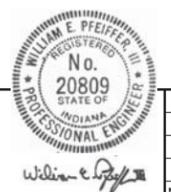
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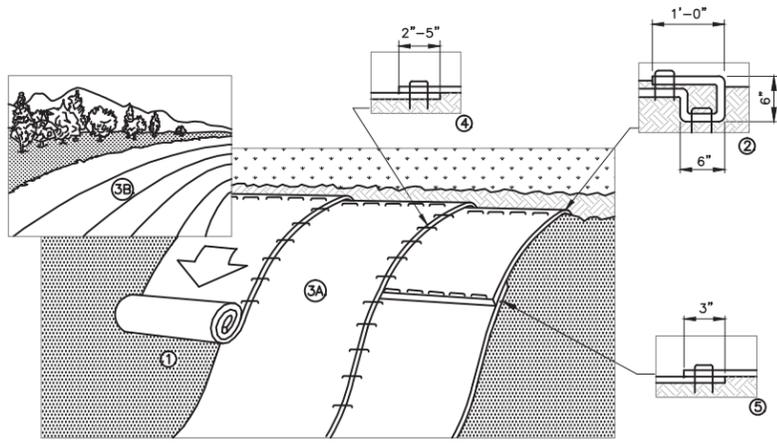
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WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY
LIFT STATION IMPROVEMENTS

STRUCTURAL
PLANS AND SECTIONS

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SHEET: 20 OF 24
DATE: APRIL 2014
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INSTALLATION GUIDE:

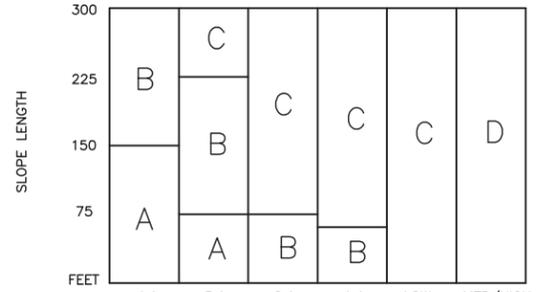
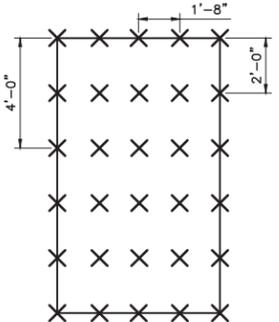
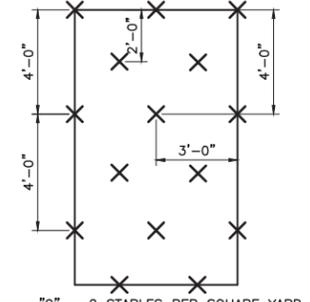
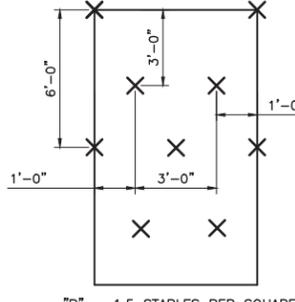
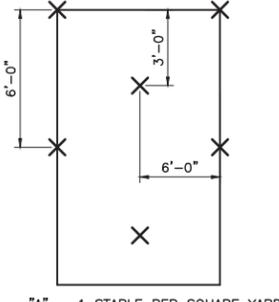
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH 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.

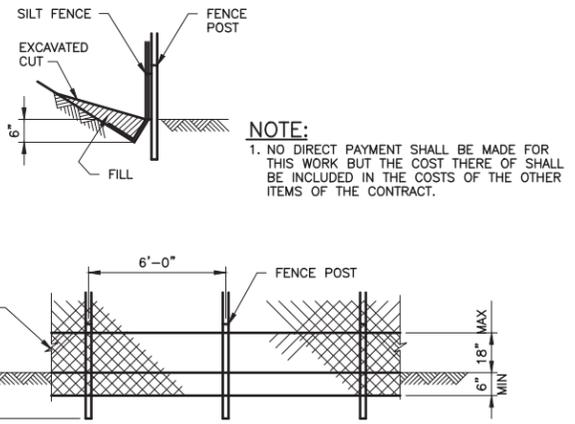
EROSION CONTROL MAT

SCALE: NOT TO SCALE



EROSION CONTROL MAT - STAPLE GUIDE

SCALE: NOT TO SCALE

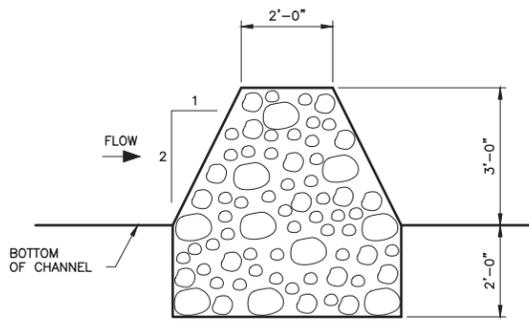
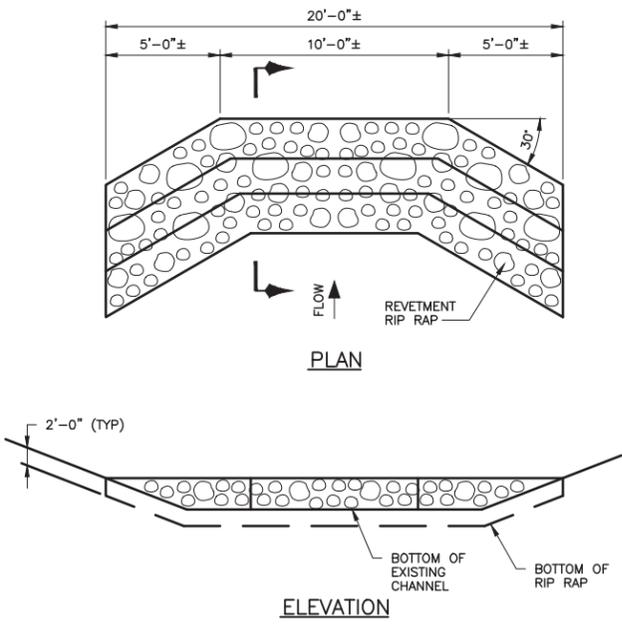


NOTE:
1. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

- 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

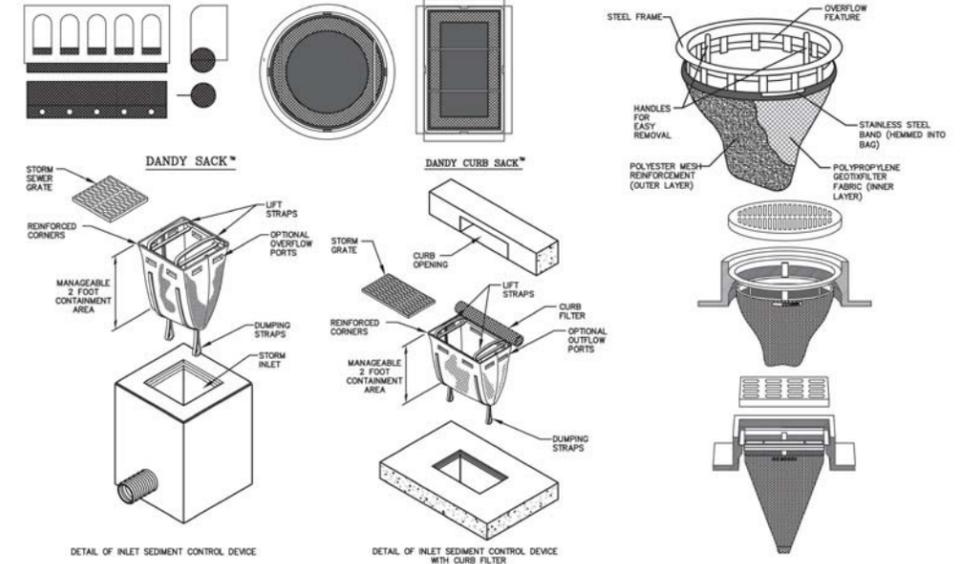


NOTES:

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 disposed of 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.

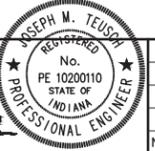
STORM INLET PROTECTION DETAIL

SCALE: NOT TO SCALE

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

DESIGNED	TSH	APPROVED	
DRAWN	MJR	SEAL AFFIXED	
CHECKED	JMT	APRIL 25, 2014	



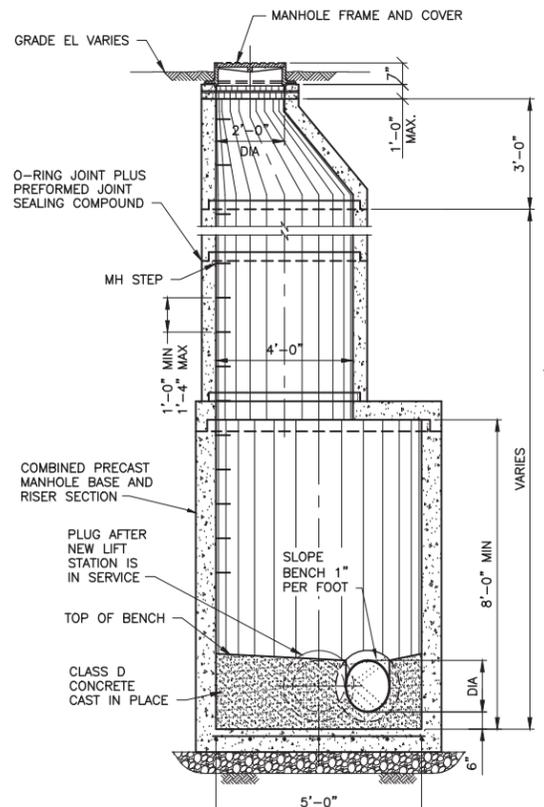
NO.	DATE	APPD	REVISION

SCALE	NOT TO SCALE
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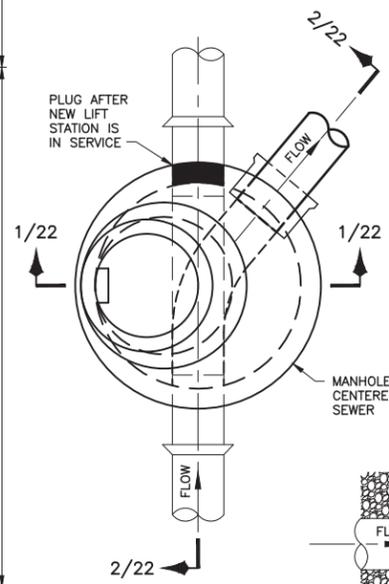
CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
EROSION AND
SEDIMENT CONTROL DETAILS

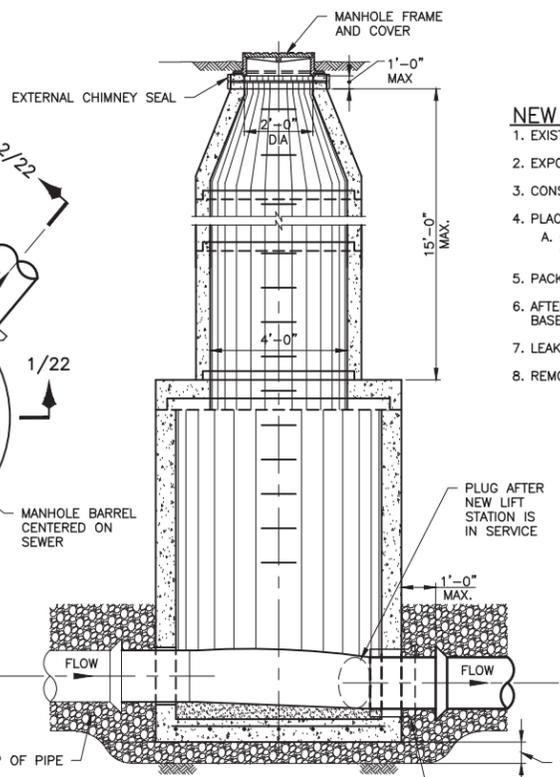
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DWG	21
SHEET	21 OF 24
DATE	APRIL 2014 REV 0



SECTION 1/22



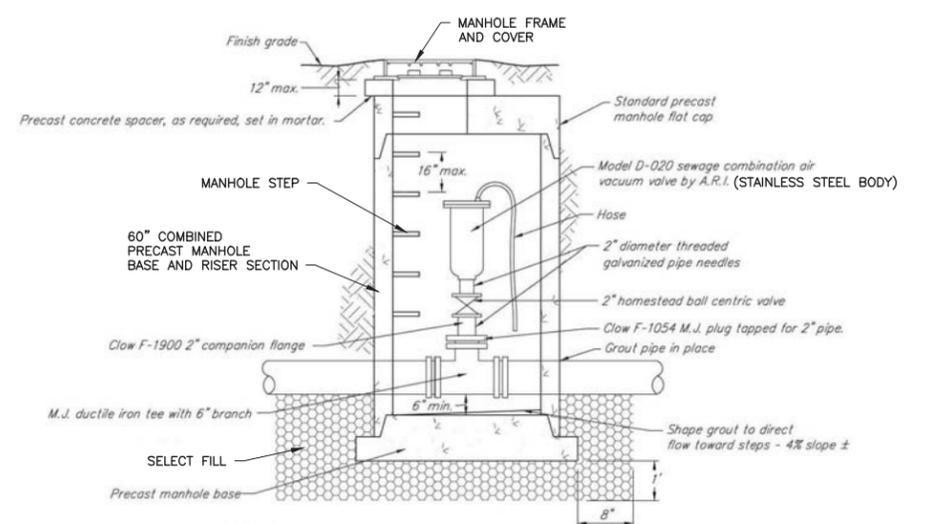
DOGHOUSE MANHOLE
SCALE: NOT TO SCALE



SECTION 2/22

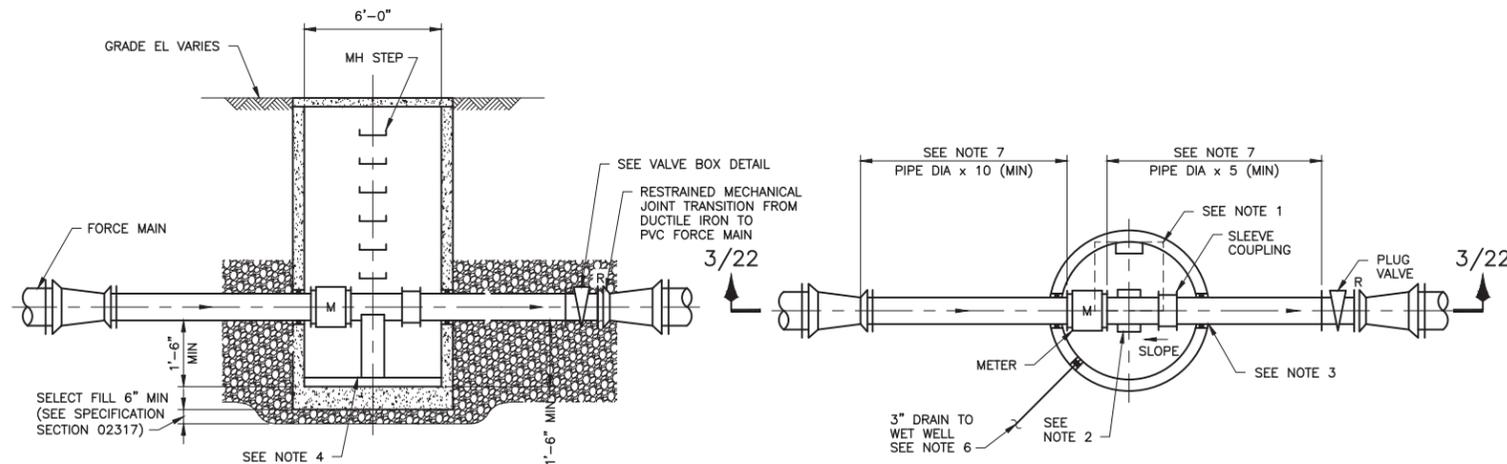
NEW MANHOLE CONSTRUCTION PROCEDURES

- EXISTING SEWERS SHALL REMAIN IN SERVICE.
- EXPOSE PIPE, VERIFY SIZE AND TYPE.
- CONSTRUCT NEW MANHOLE BASE.
- PLACE PRECAST MANHOLE SECTION WITH OPENINGS CUT FOR EXISTING SEWER.
 - CLEAN EXISTING PIPE AND WRAP PREFORMED JOINT SEALING COMPOUND AT MANHOLE.
- PACK NON-SHRINK GROUT BETWEEN MANHOLE BARREL AND SEWER PIPE.
- AFTER NEW LIFT STATION IS COMPLETE, PLACE CLASS D CONCRETE FILL IN BASE AND FLOW CHANNEL.
- LEAK TEST MANHOLE.
- REMOVE TOP PORTION OF EXISTING SEWER PIPE.



- NOTES:**
- CONTRACTOR TO PROVIDE BRACING AND SUPPORT FOR AIR RELEASE VALVE AND PIPING
 - POSITION AIR RELEASE VALVE TO ONE SIDE OF THE MANHOLE TO GRANT ACCESS TO VAULT FLOOR.

SEWAGE FORCEMAIN AIR RELEASE MANHOLE
SCALE: NOT TO SCALE



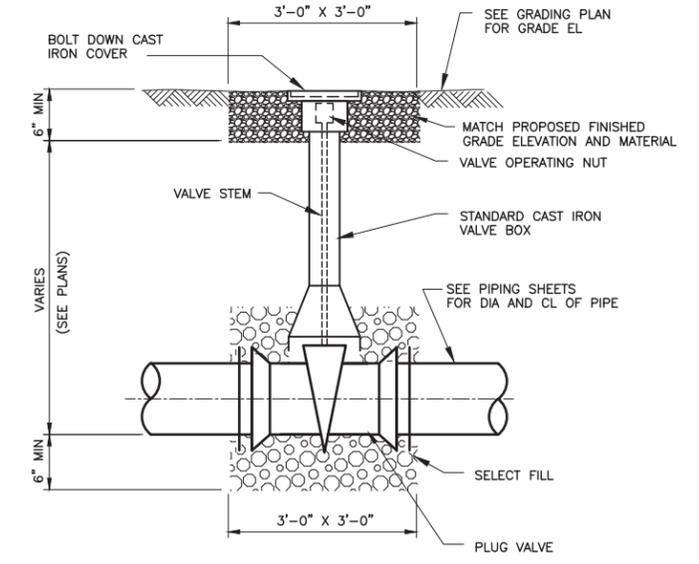
SECTION 3/22

SECTIONAL PLAN

FLOW METER VAULT

- NOTES:**
- INSTALL 3'x3' ACCESS DOOR AND FALL PROTECTION GRATING IN ACCORDANCE WITH SPECIFICATION SECTION 11210. PROVIDE 1 1/2" DRAIN PIPE FROM ACCESS DOOR DRAIN TO THE VAULT FLOOR NEAR THE DRAIN.
 - PROVIDE 1/4"x12" NEOPRENE PAD 30-50 DUROMETER HARDNESS BETWEEN FORCE MAIN AND CONCRETE SADDLE.
 - INSTALL SLEEVES AND ANNULAR SEALS FOR ALL PROCESS PIPES ENTERING AND EXITING VAULT.
 - PLACE CLASS D CONCRETE FILL. SLOPE FLOOR 1/4" PER FOOT TOWARDS DRAIN PIPE.
 - PLACE CLASS D CONCRETE BENCH. SLOPE BENCH 1/4" PER FOOT. PLACE LOW POINT OF BENCH AT CROWN ELEVATION OF THE HIGHEST PIPE ENTERING THE MANHOLE.
 - INSTALL TIDFLEX CHECK VALVE OR EQUAL ON 3" DRAIN PIPE DISCHARGE
 - INSTALL SPECIFIED MINIMUM OF STRAIGHT PIPE (NO VALVES, BENDS, ETC.) UPSTREAM AND DOWNSTREAM OF FLOW METER. INSTALL REDUCERS PER TABLE.

FLOW METER DATA TABLE			
LIFT STATION	FORCE MAIN SIZE	METER SIZE	REDUCER SIZE
SHERATON	10"	6"	10"x6"
FAIRWAY KNOLLS	6"	4"	6"x4"



VALVE BOX DETAIL
SCALE: NOT TO SCALE

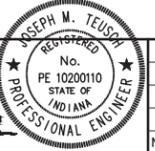
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INDIANAPOLIS, INDIANA 46278

DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014

Joseph Jansch



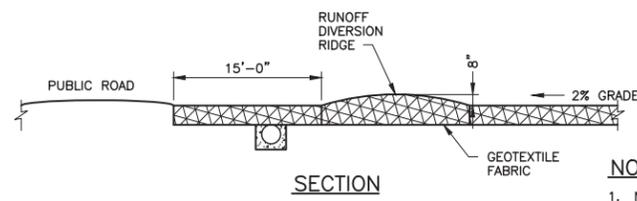
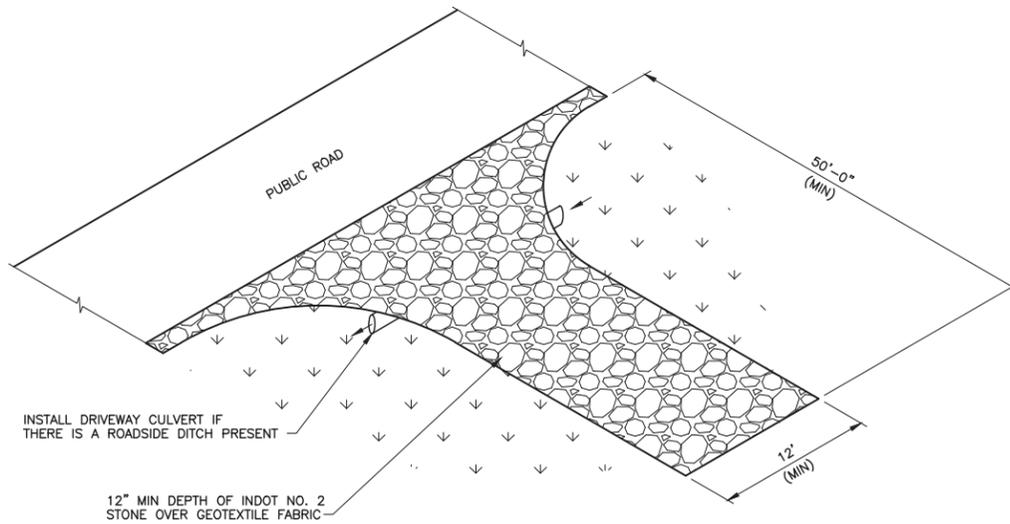
NO.	DATE	APPD	REVISION

SCALE
NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

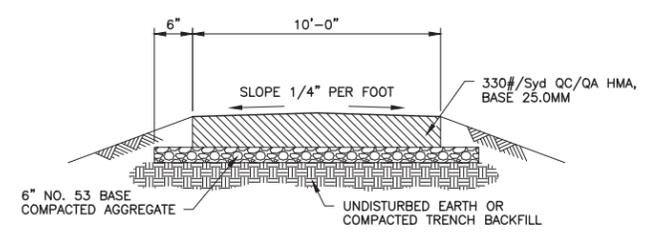
GENERAL
MANHOLE DETAILS

FILE NAME 079110622.DWG
DWG 22
SHEET 22 OF 24
DATE APRIL 2014 REV 0



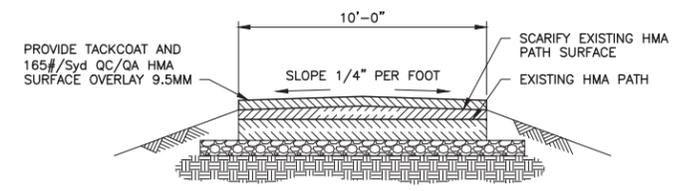
NOTE:
 1. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK BUT THE COST THERE OF SHALL BE INCLUDED IN THE COSTS OF THE OTHER ITEMS OF THE CONTRACT.

CONSTRUCTION ENTRANCE DETAIL
 SCALE: NOT TO SCALE

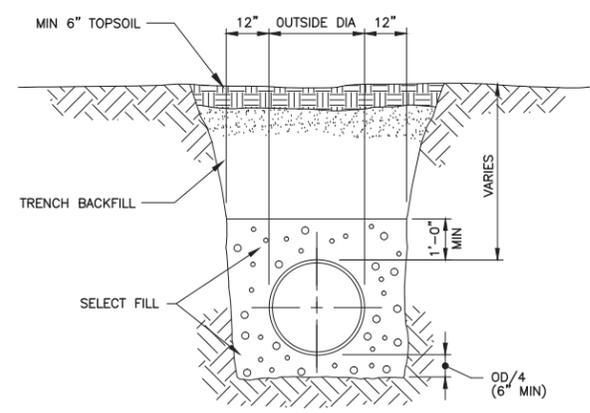


NOTES:
 1. EXISTING PATH IS 1" HMA SURFACE, 2" HMA BASE ON 6" OF STONE.
 2. REMOVE EXISTING PATH (ASPHALT AND BASE) SECTIONS WHERE DIRECTED BY OWNER AND REPLACE PER REPAIR DETAIL PRIOR TO PATH RESTORATION.
 3. HDD PITS IN PATH SHALL BE REPAIRED USING THIS DETAIL BUT SHALL BE PAID FOR UNDER THE FORCE MAIN CONTRACT ITEM.

ASPHALT PATH REPAIR DETAIL
 SCALE: NOT TO SCALE

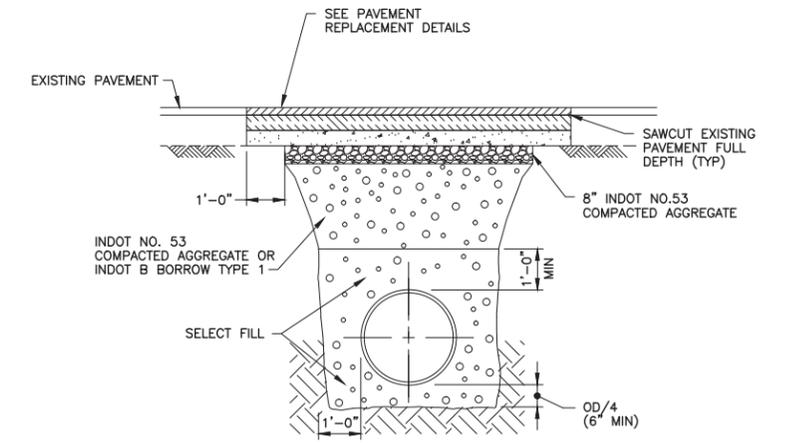


ASPHALT PATH RESTORATION DETAIL
 SCALE: NOT TO SCALE



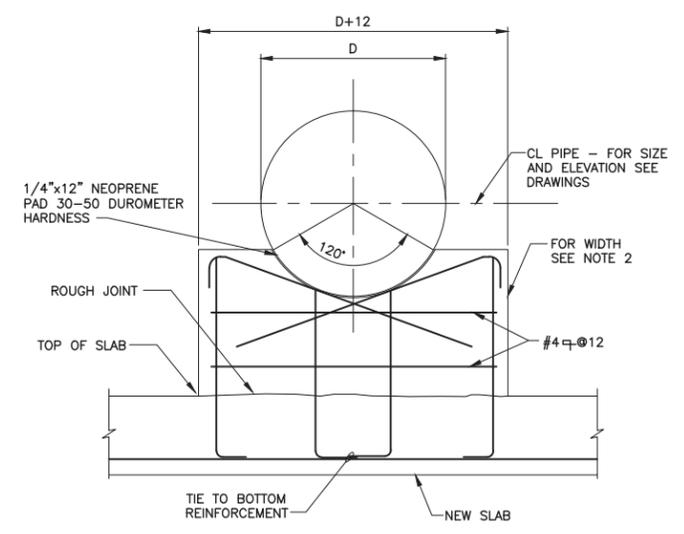
NOTES:
 1. EXTEND PIPE BEDDING TO UNDISTURBED EARTH AT THE SIDES AND BOTTOM OF THE TRENCH.
 2. SEE SPECIFICATION 02317 FOR MATERIAL REQUIREMENTS, PLACEMENT AND COMPACTION OF PIPE BEDDING AND TRENCH BACKFILL.
 3. TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE. EMBEDMENT MATERIAL SHALL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

TRENCH DETAIL UNIMPROVED AREAS
 NOT TO SCALE



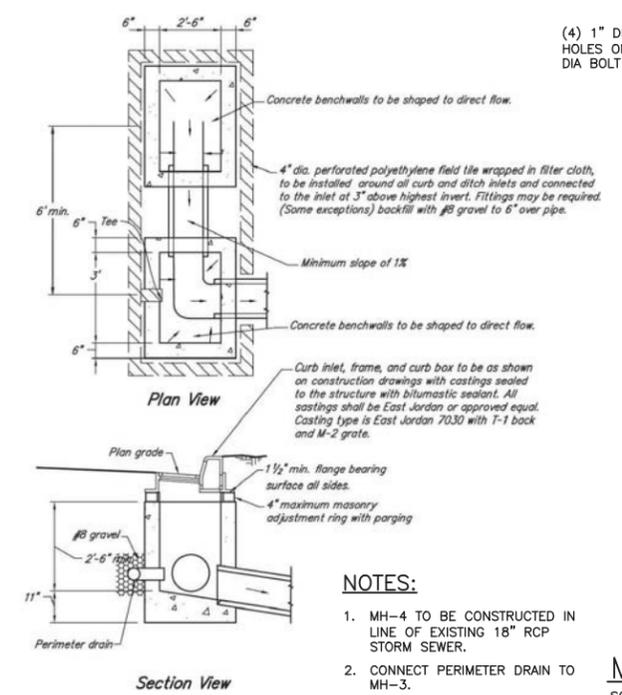
NOTES:
 1. EXTEND PIPE BEDDING TO UNDISTURBED EARTH AT THE SIDES AND BOTTOM OF THE TRENCH.
 2. SEE SPECIFICATION 02317 FOR MATERIAL REQUIREMENTS, PLACEMENT AND COMPACTION OF PIPE BEDDING AND TRENCH BACKFILL.
 3. TRENCH BACKFILL WITHIN A HORIZONTAL DISTANCE OF 5 FEET AND BENEATH ALL ROADWAYS, DRIVEWAYS, PARKING AREAS AND HIGHWAY SHOULDERS SHALL BE FULL DEPTH INDOT NO. 53 STONE, OR INDOT B BORROW TYPE 1.
 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



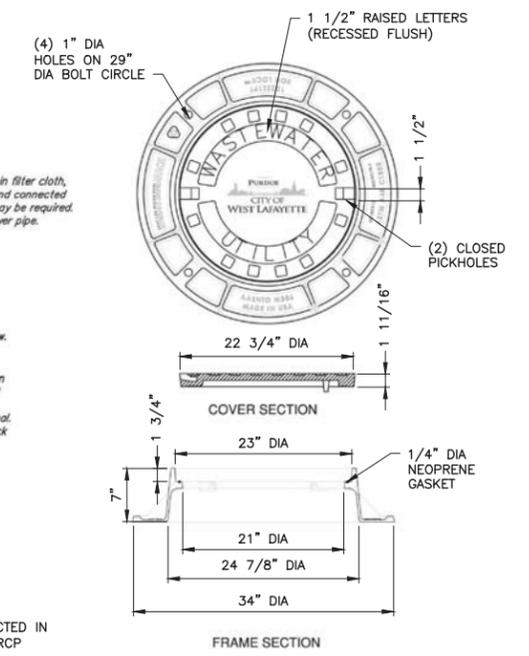
NOTES:
 1. ALL REINFORCEMENT #5@12 EACH FACE UNLESS OTHERWISE NOTED. MINIMUM REINFORCEMENT 4-#5 BARS.
 2. FOR ALL PIPES SUPPORT WIDTH SHALL BE 1'-0".
 3. FOR LOCATION OF SUPPORTS SEE PIPING DRAWINGS.

CONCRETE SADDLE DETAIL
 SCALE: NOT TO SCALE



NOTES:
 1. MH-4 TO BE CONSTRUCTED IN LINE OF EXISTING 18" RCP STORM SEWER.
 2. CONNECT PERIMETER DRAIN TO MH-3.

CURB INLETS - PRECAST TYPE
 SCALE: NOT TO SCALE

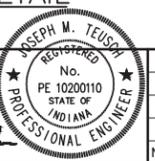


MANHOLE FRAME AND COVER
 SCALE: NOT TO SCALE

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

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CHECKED	JMT	DATE	APRIL 25, 2014



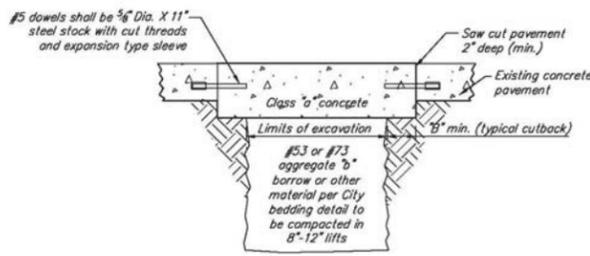
NO.	DATE	APPD	REVISION

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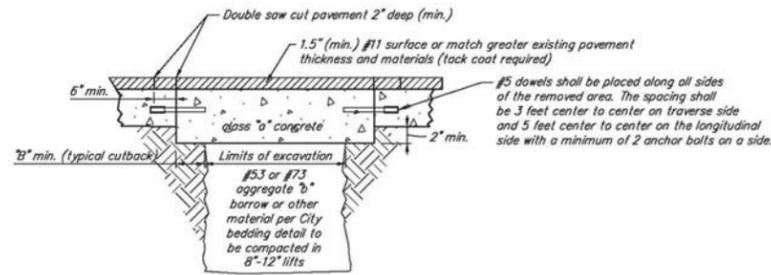
CITY OF WEST LAFAYETTE, INDIANA
 SHERATON AND FAIRWAY KNOLLS
 LIFT STATION IMPROVEMENTS

GENERAL
 MISCELLANEOUS DETAILS

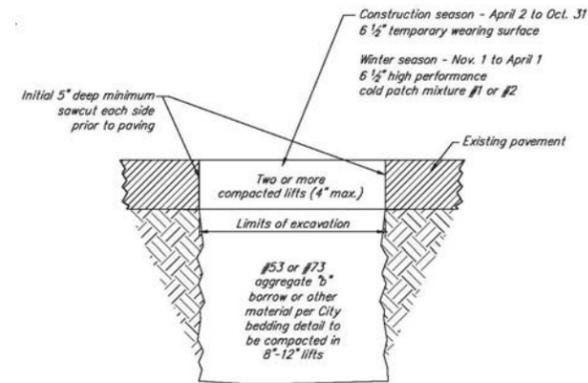
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DWG	23
SHEET	23 OF 24
DATE	APRIL 2014
REV	0



Concrete Pavement Repair

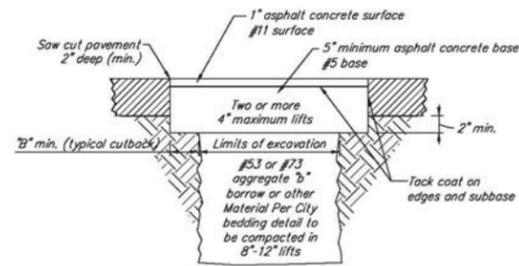


Asphalt Over Concrete Or Alternative Asphalt Pavement Repair

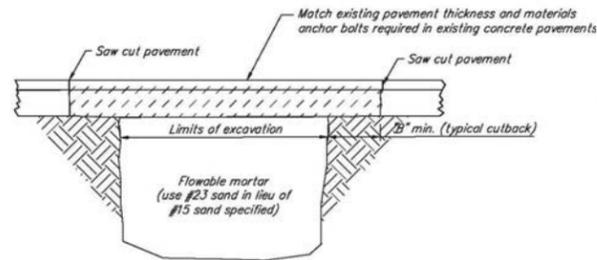


TEMPORARY ASPHALT REPAIR

Not To Scale

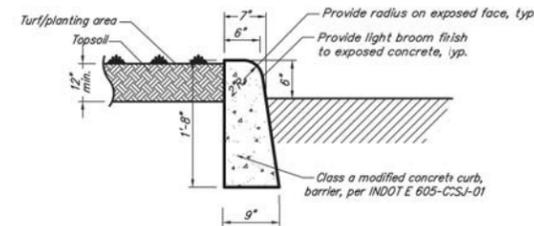


Asphalt Pavement Repair



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



BOX CURB WITH 6" FACE

Not To Scale

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.

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.

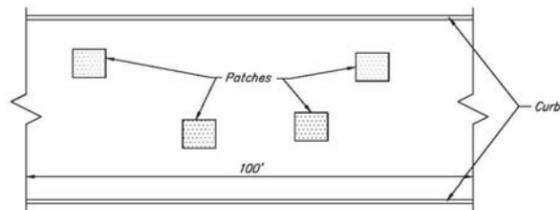
High performance cold patch mixture #1 (upm), is for use in wet and cold conditions and workable at temperatures as low as -15° F.

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.

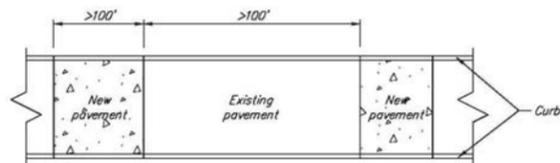
Special surface streets:

- 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.



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.

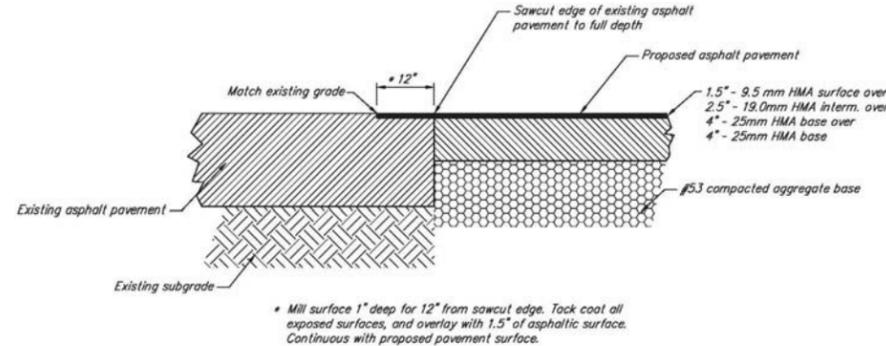


Multiple cuts to be restored as follows:

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

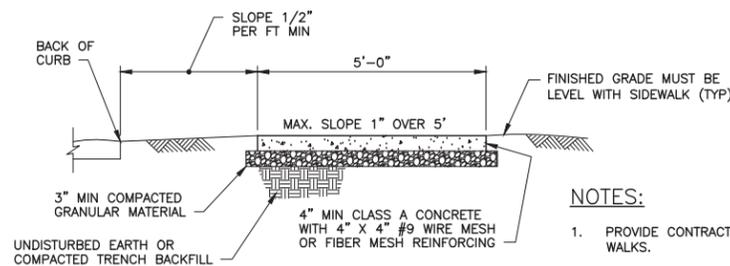
METHOD FOR REPLACING MULTIPLE OR LARGE CUTS

Not To Scale



LAP JOINT DETAIL

Not To Scale



NOTES:

- PROVIDE CONTRACTION JOINTS AT INTERVALS OF 5 FEET FOR NEW WALKS.
- PROVIDE 1/2" THICK EXPANSION JOINT AT JUNCTION OF STRUCTURES, CURBS AND AT MINIMUM 25 FOOT INTERVALS.

SIDEWALK DETAIL

SCALE: NOT TO SCALE

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

DESIGNED TSH
DRAWN MJR
CHECKED JMT

APPROVED
SEAL AFFIXED
APRIL 25, 2014



NO.	DATE	APPD	REVISION

SCALE
NOT TO SCALE

CITY OF WEST LAFAYETTE, INDIANA
SHERATON AND FAIRWAY KNOLLS
LIFT STATION IMPROVEMENTS

GENERAL
PAVEMENT AND SIDEWALK
DETAILS

FILE NAME	079110624.DWG
DWG	24
SHEET	24 OF 24
DATE	APRIL 2014
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