

To: Hamilton County Drainage Board

Phone (317) 776-8495 Fax (317) 776-9628

February 17, 2016

Re: Mud Creek – Sand Creek Drainage Area, EE Bennett Drain, AF Kinnaman Arm, Embassy Suites Relocation

Attached are plans for the proposed relocation of the EE Bennett Drain, AF Kinnaman Arm by 210 Development, LLC. The proposal is to relocate and reconstruct the existing tile drain located on parcel 13-11-23-00-00-012.000 currently owned by Jay Van Tress, Craig J Kool, Steven D Kool and Susan Smith, per the 'Embassy Suites Hotel, Conference Center and Outlots' project plans by American Structurepoint, project number 2015.01923, Sheet C300 & C310, dated 11/30/2015. The upstream end of this relocation will begin at an existing manhole structure near the east property line, near the west right-of-way line of Olio Road. The downstream end of this extension will end that an existing storm structure located near the north property line and south of the south right-of-way line or Tegler Blvd. This relocation will take place completely on the Embassy Suites parcel.

This relocation will consist of the following:

534' of 30" RCP

195' of open drain

44' of 24" RCP

The newly installed drain will have a length of 773'. The existing 784' of tile drain between existing stations 0+00 and 7+84 will be removed and abandoned. This proposal will subtract 11' of footage from the drain's total length.

The new drain will involve the following structures: Ex 101, 102, 103, 200 and Ex. 54. The existing structures were installed in 2010 with the Olio – I-69 Bridge Arm project.

The 195' of open drain, noted above, drains through the detention pond. The pond is not to be considered part of the regulated drain for maintenance. Drain maintenance at the pond shall include the inlet and outlet as part of the regulated drain. The maintenance of the ponds such as sediment removal, erosion control along the banks, mowing and

aquatic vegetation control will be the responsibility of the property owner. The Board will retain jurisdiction for ensuring the storage volume for which the pond was designed will be retained, thereby, allowing no fill or easement encroachments.

The AF Kinnaman Drain was established in 1892 (See Viewers Report, October 14, 1892) and later combined with the EE Bennett Drain. The EE Bennett Drain was later made an arm to the Mud Creek/Sand Creek Drainage Area, as per my report to the Board dated May 1, 2007 and approved at hearing on June 25, 2007. See Hamilton County Drainage Board minutes book 10, pages 324-325.

The cost of the project is to be paid by the developer. The petitioner has submitted surety for the proposed drain at this time. The surety which is in the form of a Letter of Credit from the developer is as follows:

Agent: InterBank

Date: February 5, 2016

Expiration Date: February 11, 2017

Number: 20107559 For: Embassy Suites

Demolition and relocation of the existing EE Bennett drain

Amount: \$84,390.00

I recommend that upon approval of the above proposed drain that the Board also approve the attached non-enforcement request. The request will be for the reduction of the regulated drain easement to those easement widths as shown on the secondary plats for Embassy Suites Hotel and Conference Center as recorded in the office of the Hamilton County Recorder.

I recommend that this drain be classified as an urban drain.

I believe this proposed drain meets the requirements for relocations as set out in IC 36-9-27-52.5. Therefore, a hearing without public notice is required. I recommend approval.

Sincerely.

Kenton C. Ward

Hamilton County Surveyor

KCW/stc

Adobe PDF Fillable Form

HAMILTON COUNTY DRAINAGE BOARD NOBLESVILLE, INDIANA

IN RE	·)	
11 (102	: Hamilton County, Indiana		FE
	DETITION FOR DELOCATION A	NID DECONICEDI	JESICE CE MANUELLE
	PETITION FOR RELOCATION A	ND RECONSTRU	<u>JCHON</u>
	210 Devolopment, LLC		(hereinafter Petitioner"),
hereby	petitions the Hamilton County Drainage Bo	ard for authority t	o relocate and improve a
section	n of theEE Bennett		Drain, and in support of
	etition advises the Board that:		
1.	Petitioner owns real estate through which a	portion of the	EE Bennett
	Drain runs.		
2.	Petitioner plans to develop its real estate wi	th roads, buildings	s, utilities, storm drains,
	sanitary sewers and other structures.		
3.	Petitioner's proposed development of its rea	al estate will requi	re relocation and
	reconstruction of a portion of the	EE Bennett	Drain, as
	specifically shown on engineering plans and	d specifications fil	ed with the Hamilton
	County Surveyor.		
4.	The work necessary for the proposed reloca	tion and reconstru	action will be undertaken at
	the sole expense of the Petitioner and such	work will result in	substantial improvement to
	the EE Bennett	Drain, without cos	t to other property owners
	on the watershed of theEE	Bennett	Drain.
5.	Proposed relocation and reconstruction will	not adversely affe	ect other land owners within
	the drainage shed.		
6.	Petitioner requests approval of the proposed	d relocation and re	construction under
	IC 36-9-27-52.5.	,	
7	WHEREFORE, Petitioner requests that an Or	der issued from th	ne Hamilton County
Draina	age Board authorizing relocation and reconst	ruction of the	EE Bennett
	in conformance with applicable law and plan		
Count	y Surveyor.		
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	Signe	12/12/23	
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OPINION OF CONSTRUCTION COST

Embassy Suites - Tegler and Olio - EE Bennett Legal Drain Relocation

ASI Project No.: 2015.01923

Date: 1/27/2016

Estimated Legal Drain	Relocation Costs
Total:	\$70,325.00
120% of Costs	\$84,390.00

Legal Drain	n Relocation			
Removal of Existing 12" Legal Drain Tile	795.00	LF	\$10.00	\$7,950.00
Core Drill Existing Structure	1.00	EA	\$1,500.00	\$1,500.00
30" RCP	530.00	LF	\$65.00	\$34,450.00
Type "J" Manhole	1.00	EA	\$5,000.00	\$5,000.00
30" Concrete End Section with Animal Guard and Anchor	1.00	EA	\$3,000.00	\$3,000.00
Granular Backfill	725.00	CYD	\$25.00	\$18,125.00
Outlet Protection - Riprap	6.00	TONS	\$50.00	\$300.00
			Total	\$70,325.00





This Letter of Credit replaces Letter of Credit #20107559 dated February 5, 2016

IRREVOCABLE STANDBY LETTER OF CREDIT #20107559

INTERBANK P O Box 5258 Enid, OK 73703 Phone 580-234-6057 Fax 580-701-6424

> Irrevocable Standby Letter of Credit 20107559 February 11, 2016

Beneficiary:

Hamilton County Board of Commissioners One Hamilton County Square Noblesville, IN 46060 ATTN: Kent Ward

Applicant:

210 Development LLC 5701 Progress Street Indianapolis, IN 46241

Issue Date:

February 11, 2016

Expiration Date:

February 5, 2017

Amount:

\$84,390.00

Letter of Credit No.:

20107559

RE:

Embassy Suites

Demolition and relocation of the existing EE Bennett legal drain

EE Bennett Legal Drain

We hereby establish our Irrevocable Standby Letter of Credit No. 20107559 in your favor for the account of 210 Development LLC up to an aggregate amount of Eighty-four thousand three hundred ninety dollars and no/100-----(\$84,390.00) available by your endorsed draft(s) at sight drawn on InterBank.

Endorsed drafts to be accompanied by the following document(s):

1) Original Letter of Credit and any amendments.

Endorsed drafts must be marked "Drawn under InterBank Irrevocable Standby Letter of Credit No. 20107559 dated February 11, 2016."

We hereby agree with you that drafts drawn under and in strict compliance with the terms of this credit will be duly honored by us upon presentation at this office on or before our close of business on February 5, 2017, or any automatically extended expiration date.



Page 2

IRREVOCABLE STANDBY LETTER OF CREDIT #20107559

It is a condition of this Irrevocable Standby Letter of Credit that it shall be automatically extended without amendment for additional periods of one year from the present and each future expiration date, unless, not less than thirty (30) days prior to such expiration date we notify the Beneficiary in writing, by certified mail to the Beneficiary's address, that we elected not to extend this Irrevocable Standby Letter of Credit, provided, that under no circumstances shall this Irrevocable Standby Letter of Credit be automatically extended without amendment for any period extending beyond the date that is eight (8) years after the Issue Date listed above.

Except as otherwise expressly state herein, this Letter of Credit is issued subject to the International Standby Practices of the International Chamber of Commerce, Publication 590 ("ISP98"). This Letter of Credit shall be deemed to be a contract made under the laws of the State of Indiana and shall, as to matters not governed by ISP98, be governed by and construed in accordance with the laws of the State of Indiana, other that its conflict of laws rules, which would result in the application of the law of any jurisdiction other than the laws of the State of Indiana.

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Paul Reherman, Sr Vice President

State of OK, County of Garfield ss. This instrument was acknowledged before me this as Senior Vice President of InterBank.	day of February	, <u>2016</u> t	y Paul Reherman
My commission expires: Sept. 9,2011 Commission number: 00013315		STACEY L. SNELLITO Netwy Public State of Cidehoma)



FEB 1 6 2016

OFFICE OF HAMILTON COUNTY SURVEYOR

February 12, 2016

Hamilton County Board of Commissioners One Hamilton County Square Noblesville, IN 46060 Attn: Kent Ward

RE: 210 Development LLC

Replacement Letter of Credit #20107559

Dear Kent:

Enclosed is the Irrevocable Replacement Letter of Credit #20107559 dated February 11, 2016 to the original Irrevocable Letter of Credit #20107559 dated February 5, 2016 in the amount of \$84,390.00 for 210 Development LLC.

Please, send any sight drafts to be presented for payment to the attention of Paul Reherman at the address below. If you have any questions, please feel free to contact me at (580) 977-1750.

InterBank 3702 West Owen K Garriott Road Enid, OK 73703

Thank you.

Sincerely,

Kay Temes

Letter of Credit Processing

Enclosure

Overnight UPS





Kenton C. Ward, CFM Surveyor of Hamilton County Phone (317) 776-8495 Fax (317) 776-9628

Suite 188 One Hamilton County Square Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

April 11, 2017

Re: #349 EE Bennett Drain, AF Kinnaman Arm: Embassy Suites Relocation

Attached are as-builts and other information for the Embassy Suites Relocation. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain, which will alter the plans submitted with my report for this drain-dated February 17, 2016. The report was approved by the Board at the hearing held February 22, 2016. (See Drainage Board Minutes Book 16, Pages 461-462) The changes are as follows: the 30" RCP was lengthened from 534 feet to 543 feet. The 24" RCP was shortened from 44 feet to 38 feet. The open ditch was lengthened from 195 feet to 226 feet. The length of the drain due to the changes described above is now **807 feet**. The original 12" tile was removed from Sta. 0 to Sta. 7+84. Thus, the project added 23 feet to the drains overall length.

The non-enforcement was approved by the Board at its meeting on February 22, 2016and recorded under instrument #2017009905.

The following sureties were guaranteed by InterBank and released by the Board on its March 13, 2017 meeting.

Bond-LC No: 20107559 Amount: \$84,390.00 For: Storm Sewers

Issue Date: February 5, 2016

I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

Kenton C. Ward, CFM Hamilton County Surveyor

CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

11100062

Re: E.E. Bennett Drain Relocation

I hereby certify that:

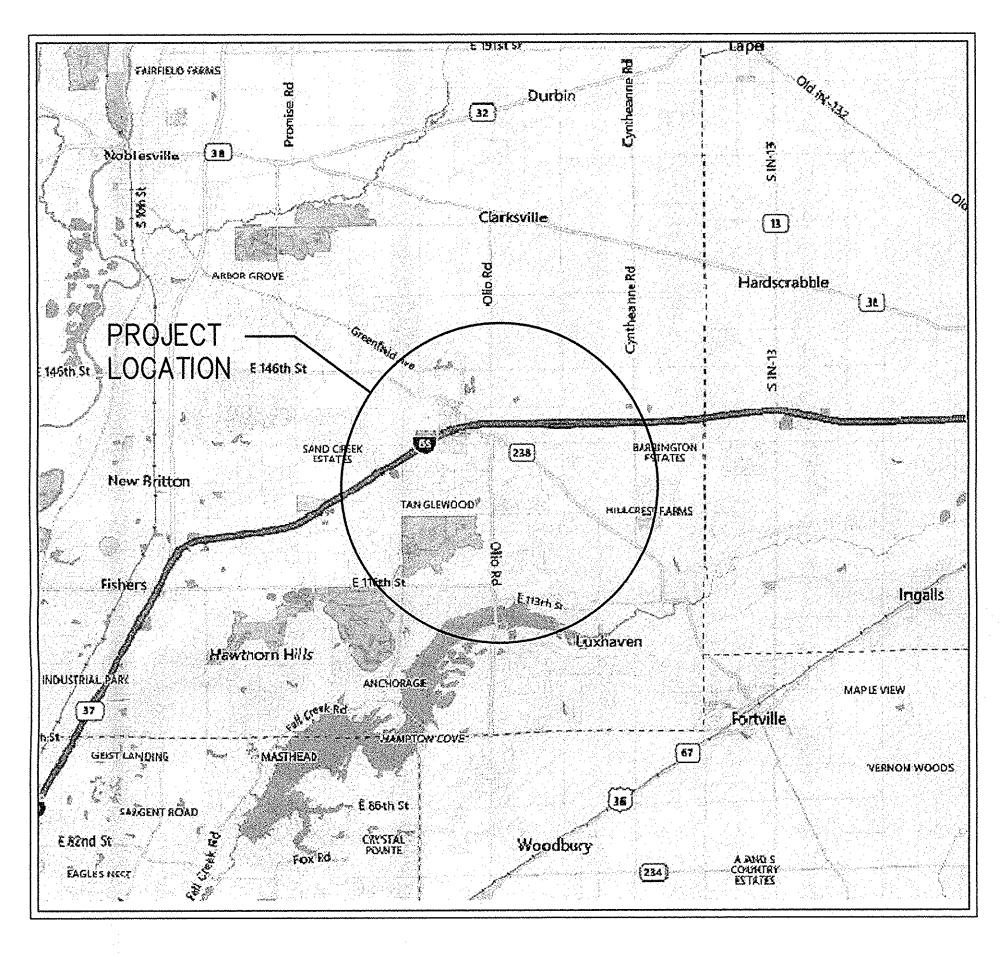
- 1. I am a Registered Land Surveyor or Engineer in the State of Indiana.
- 2. I am familiar with the plans and specifications for the above referenced subdivision.
- 3. I have personally observed and supervised the completion of the drainage facilities for the above referenced subdivision.
- 4. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been installed and completed in conformity with all plans and specifications.
- 5. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been correctly represented on the Record Drawings, Digital Record Drawings and the Structure Data Spreadsheet.

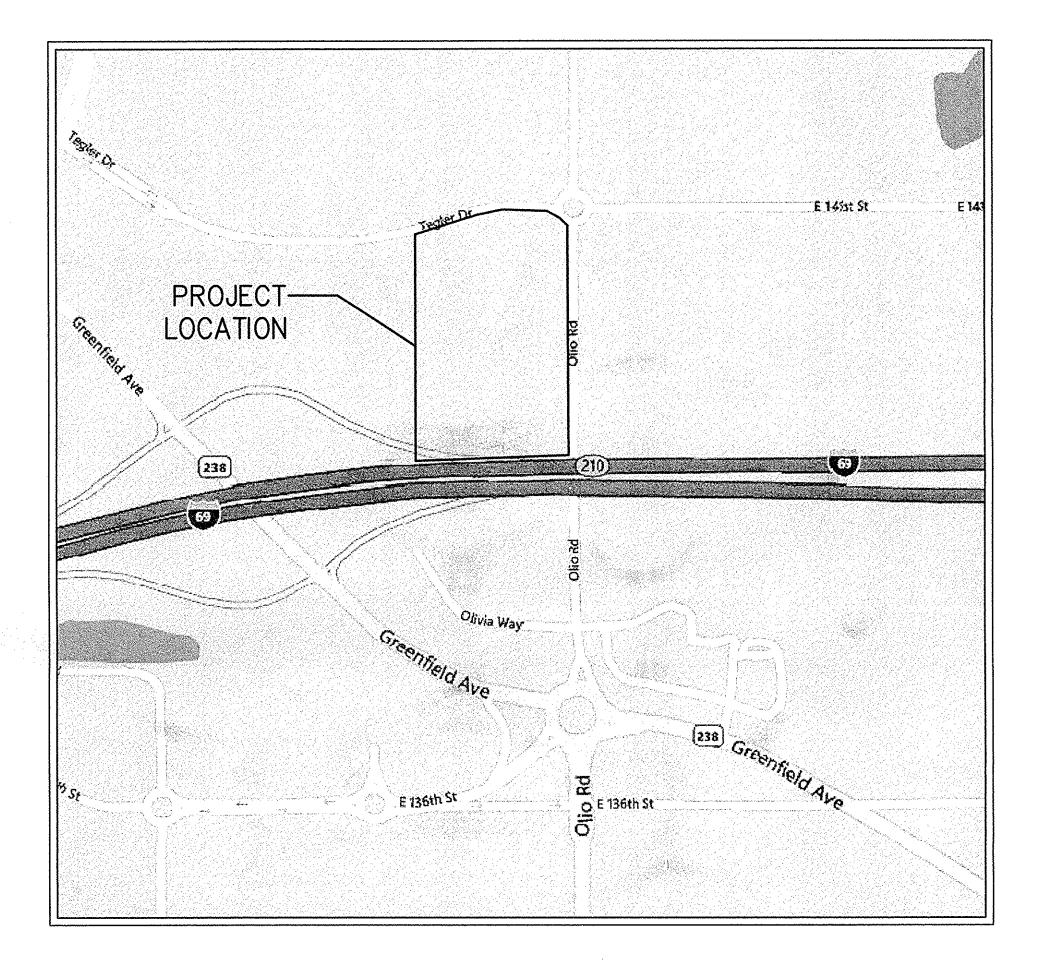
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Signature:	Date: 01/25/2017
Type or Pfint Name Brackley Schra	ıge
Business Address: 7260 Shadeland	Station
Indianapolis, I	
Telephone Number: 317-547-5580	
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SEAL	INDIANA REGISTRATION NUMBER
CISTERA COLL	PE11100062

CONSTRUCTION PLANS

FOR

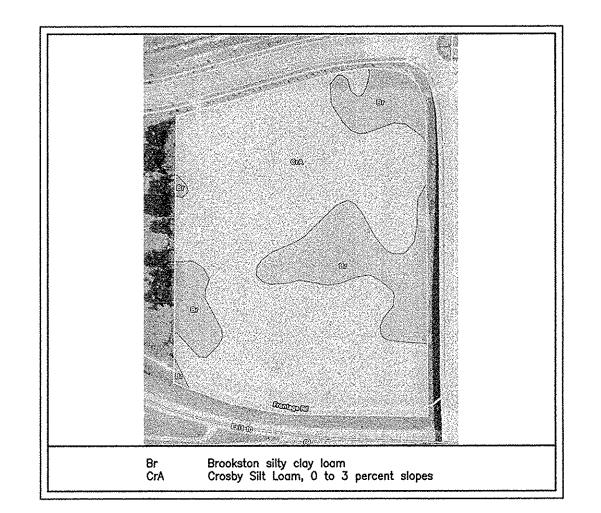
EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN 46060

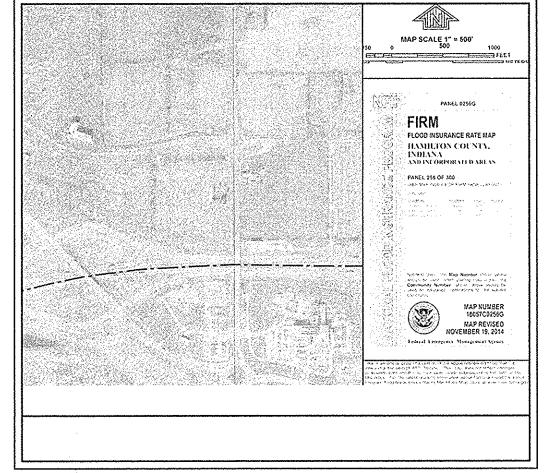




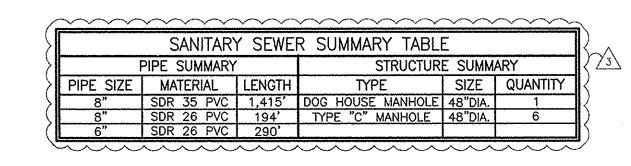
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	C410-C413
FROSION CONTROL PLAN	C500
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STORMWATER POLLUTION PREVENTION PLAN	C510
EROSION CONTROL DETAILS	C520-C521
SITE DETAILS	C600-C602
INDIANA AMERICAN WATER COMPANY DETAILS	C700
LANDSCAPE PLAN & DETAILS	C800-C801
LIGHTING PLAN & DETAILS	E101-E102
NOBLESVILLE STANDARD DETAILS	i











PLANS PREPARED FOR:

INDY NE LODGING ASSOCIATES, LLC 5701 PROGRESS ROAD

PLANS PREPARED BY:

INDIANAPOLIS, IN, 46241





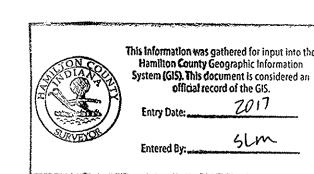
PLAN DATE: 11/30/2015

CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.

CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.

INFORMATION.

SEE SHEET COO2 GENERAL NOTES FOR MORE

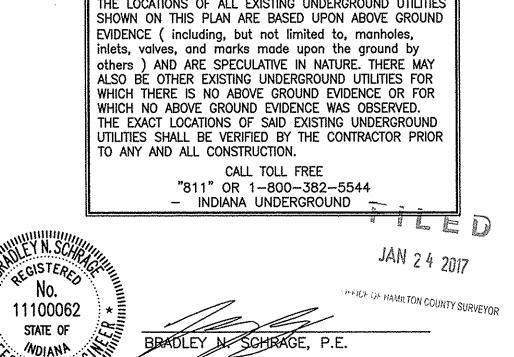


	REV	DATE	DESCRIPTION
n was gathered for input into the	A	03/16/2016	TAC & SWPPP COMMENTS
runty Geographic Information This document is considered an	2	04/13/2016	ACCESS DRIVE
I record of the GIS.	3	05/04/2016	TAC COMMENTS
2017	4	06/16/2016	ISSUED FOR CONSTRUCTION
Slm	5	08/03/2016	UTILITY COORDINATION
	l :: "		

THE NOBLESVILLE STANDARDS SHALL BE INCORPORATED BY REFERENCE INTO THESE PLANS. THE CITY OF NOBLESVILLE STANDARDS FOR PUBLIC INFRASTRUCTURE CONSTRUCTION SHALL BE INCORPORATED BY REFERENCE INTO THESE PLANS. IN THE EVENT THAT CONFLICTING STANDARDS OCCUR; THE FOLLOWING ORDER OF A. CITY OF NOBLESVILLE STANDARDS INDIANA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS TEN STATE STANDARDS ANY OTHER APPLICABLE STANDARDS AND SPECIFICATIONS ERRORS AND OMISSIONS STATEMENT Design professional certifying plans for the project acknowledges their professional responsibility for the technical accuracy of its work and certifies that its plans reflect customary professional skill and care in design professional's efforts to comply with all appropriate laws, standards, regulations and ordinances. If the design professional's plans fail to meet this standard, the design professional shall determine a solution that complies with all appropriate laws, standards, regulations and ordinances. If such an error or omission is found, the developer is not relieved to comply with all appropriate laws, standards, regulations and ordinances.

	UTILITY CONT	ACTS	
UTILITY	COMPANY	CONTACT	PHONE NO.
GAS	VECTREN	RANDY CRUTCHFIELD	317-776-5560
ELECTRIC	DUKE ENERGY	TRACY GRADY	1-800-774-0246
TELEPHONE	AT&T	BRIAN PETERS	317-610-5437
WATER	INDIANA AMERICAN WATER CO.	TRACY WHITE	317-885-2426
SANITARY	CITY OF NOBLESVILLE	BRIAN GRAY	317-776-6330
CABLE	INSIGHT COMMUNICATIONS	MATTHEW STRINGER	317-774-3384

	CAUTION !! THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES	S 08/03/2016 UTILITY COORDINATION CAUTION !!	1/3/	00/04/2010	MO COMMENTO
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GENERAL NOTES

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

DEMOLITION NOTES

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

SITE NOTES

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

GRADING NOTES

- 1. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
- 3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH), SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION. SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATIONS OF UTILITIES FOR THEIR OWN
- CONTRACTOR TO ADJUST ALL EXISTING SURFACE INFRASTRUCTURE (HYDRANTS, VALVES, HANDHOLES, CASTINGS, IRRIGATION SYSTEM, UTILITY PEDESTALS, ETC.) AS REQUIRED TO MEET PROPOSED GRADE AT HIS/HER OWN COST.
- 5. AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL SHALL BE PERFORMED BY A LOADED TANDEM PNEUMATIC TIRE DUMP TRUCK MINIMUM GROSS VEHICLE WEIGHT OF 22 TONS. THE TIRES SHALL BE OPERATED AT INFLATION PRESSURES BETWEEN 70-80 PSI UNLESS OTHERWISE NOTED BY THE GEOTECHINICAL ENGINEER. THE TIRES SHALL BE INFLATED WITH AIR ONLY, NO LIQUID SHALL BE USED. THE PROOFROLL SHALL BE COMPLETED UNDER INSPECTION OF SOILS FIRM TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND OR REMOVAL OF ANY UNSUITABLE MATERIAL WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
- 6. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING IN ALL AREAS. AFTER INSTALLATION CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, STANDING WATER CONDITIONS.
- 7. ALL PROPOSED SPOT ELEVATIONS OR CONTOURS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
- 8. SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
- 9. TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
- 10. CONTRACTOR TO PERPETUATE ANY SUBSURFACE DRAIN TILES OR PIPES ENCOUNTERED DURING CONSTRUCTION AND PROVIDE POSITIVE OUTLET TO DOWNSTREAM RECEIVING SYSTEM. CONTRACTOR TO NOTIFY THE ENGINEER WITH ANY CIRCUMSTANCES WHERE THIS CANNOT BE ACCOMPLISHED.
- 11. DUE TO SITE CONSTRAINTS, THE EARTHWORK FOR THE SITE AS DESIGNED MAY OR MAY NOT BALANCE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE EXISTING CONDITIONS AND INCLUDE IN THEIR BID ALL EARTHWORK COSTS INCLUDING IMPORTS AND/OR EXPORTS NECESSARY TO MAKE THE SITE BALANCE.
- 12. CONTRACTOR TO STABILIZE EXPOSED EARTH AS INDICATED BY THE STORMWATER POLLUTION PREVENTION PLAN OR GOVERNING AUTHORITY.

UTILITY NOTES

- 1. SITE UTILITIES SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- 2. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
- 3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH), SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION. SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATIONS OF UTILITIES FOR THEIR OWN WORK.
- 4. CONTRACTOR TO ADJUST ALL EXISTING SURFACE INFRASTRUCTURE (HYDRANTS, VALVES, HANDHOLES, CASTINGS, IRRIGATION SYSTEM, UTILITY PEDESTALS, ETC.) AS REQUIRED TO MEET
- 5. ALL UTILITY MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL STANDARDS FOR EACH UTILITY AGENCY HAVING JURISDICTION.
- 6. TRENCHES FOR ALL UTILITY LINES SHALL BE BACKFILLED COMPLETELY WITH SELEC GRANULAR MATERIAL IF THE TOP OF THE TRENCH IS WITHIN 5 FEET OF PAVEMENT.
- 7. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES AND CONDUITS TO AVOID CONFLICTS AND PROVIDE REQUIRED MINIMUM DEPTHS OF COVER. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL BENDS WITH THRUST BLOCKS REQUIRED TO ASSURE PROPER INSTALLATION OF WATER MAINS AND LATERALS.
- 8. IN THE EVENT OF A CONFLICT BETWEEN WATER LINES AND STORM DRAINS, THE CONTRACTOR SHALL EITHER ADJUST THE WATER LINE DOWNWARD IN SUCH A MANNER SO THAT THE PIPE MANUFACTURER'S RECOMMENDATIONS ON PIPE DEFLECTION AND JOINT STRESS ARE NOT EXCEEDED OR THE CONTRACTOR SHALL PROVIDE APPROPRIATE BENDS AND CROSSINGS.
- 9. ALL COORDINATES AND DIMENSIONS ARE TO THE CENTERLINE OF UTILITIES AND STRUCTURES.
- 10. ALL STORM INLET CASTINGS TO BE STAMPED "DUMP NO WASTE DRAINS TO WATERWAY".

EROSION CONTROL NOTES

- 1. CONTRACTOR SHALL INSTALL ALL PERIMETER SILT FENCE AND SEDIMENT CONTROL BARRIERS PRIOR TO CLEARING AND GRADING.
- 2. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE

4. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING RE-GRADING,

- 3. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
- SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
- 5. SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN RECEIVING WATER. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF
- 6. WASTE AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTE AND UNUSED BUILDING MATERIALS IS REQUIRED.
- CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL. 8. SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE

7. SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED.

COLLECTED AND RE-DISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.

9. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER

10. THE SITE IS NOT LOCATED WITHIN ANY FLOODPLAIN, FLOODWAY OR FLOODWAY FRINGE AS INDICATED ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR HAMILTON COUNTY, IN, MAP NUMBER 18057C0256G, DATED NOVEMBER 19, 2014.

OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.

- 11. SCHEDULE OF EARTHWORK ACTIVITIES:
- a. THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED AS SOON AS POSSIBLE. UN-VEGETATED AREAS THAT ARE SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FIFTEEN (15) DAYS OR MORE MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITH MEASURES APPROPRIATE FOR THE SEASON TO MINIMIZE EROSION POTENTIAL. ALTERNATIVE MEASURES TO SITE STABILIZATION ARE ACCEPTABLE IF THE PROJECT SITE OWNER OR THEIR REPRESENTATIVE CAN DEMONSTRATE THEY HAVE IMPLEMENTED EROSION AND SEDIMENT CONTROL MEASURES ADEQUATE TO PREVENT SEDIMENT DISCHARGE.
- b. TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIMES OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
- c. INSTALL INLET PROTECTION AROUND INLETS IMMEDIATELY UPON COMPLETION OF THE STRUCTURE. REMOVE INLET PROTECTION FOR PAVING OPERATION. REPLACE INLET PROTECTION AFTER PAVING IS COMPLETE. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON SEEDED AREAS BEHIND THE
- 12. PRIOR TO COMPLETION OF THE PROJECT, CONTRACTOR SHALL CLEAN OUT ALL STORM DRAINAGE STRUCTURES AND RESTORE ALL DITCHES AND PONDS TO DESIGNED GRADES.
- 13. CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROL BARRIERS ONCE CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED.

EXISTING LEGEND

- BEEHIVE INLET
- BUSH CURB INLET D DRAINAGE MANHOLE

ELECTRIC CROSS BOX

- - TELEPHONE MARKER SIGN E ELECTRIC HANDHOLE E ELECTRIC METER BOX
 - र्ह्नि TREE e BURIED ELECTRIC LINE ohe OVERHEAD ELECTRIC LINE

--- SIGN

- GUY WIRE LIGHT POLE POST D POWER POLE
- t BURIED TELEPHONE LINE tr BURIED ELECTRIC LINE inv OVERHEAD ELECTRIC LINE rcp BURIED TELEPHONE LINE ☑ RIGHT OF WAY MONUMENT pvc BURIED TELEPHONE LINE cpp BURIED TELEPHONE LINE

S SANITARY MANHOLE

TELEPHONE MANHOLE

BENCHMARK DATA

& SPRINKLER CONTROL VALVE

BENCHMARK INFORMATION

ELEV = 860.34

(1929 datum) AN ISHC BRONZE PLATE SET IN THE NORTH END OF THE EAST CURB OF THE STATE ROAD 238 BRIDGE OVER I-69.

BRIDGE HAS BEEN REPLACED; MONUMENT DESTROYED.

CUT "X" FOUND NNW BONNET BOLT FIRE HYDRANT AT 30' WEST OF FAMOUS DAVE'S ENTRANCE: SOUTH SIDE TEGLER DRIVE. ELEV = 834.13

CUT SQUARE FOUND ON THE NORTH TIP ISLAND MEDIAN AT THE CENTERLINE OF BERGEN BLVD IN FRONT OF INTAMETCO BUILDING, 1400'± NORTH OF CAMPUS PARKWAY. ELEV = 827.94

CUT "X" ON NORTH BOLT FIRE HYDRANT LOCATED ±30' EAST OF Q BERGEN BLVD AND ±100' SOUTH OF TEGLER DRIVE. ELEV = 830.15

INDY NE LODGING ASSOCIATES, LLC

5701 PROGRESS ROAD

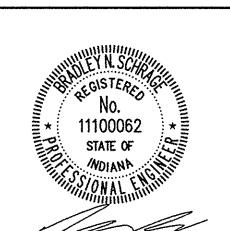
INDIANAPOLIS, IN, 46241



7260 Shadeland Station | Indianapolis, Indiana 46256 TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

OLIO ROAD AND **TEGLER DRIVE.** NOBLESVILLE, IN 46060



CERTIFIED BY: BRADLEY N. SCHRAGE

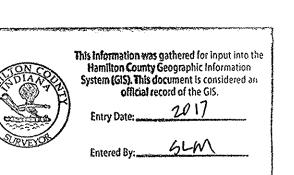
ISSUANCE INDEX

CONSTRUCTION DOCUMENTS

DATE:

11/30/2015

PROJECT PHASE:



GENERAL NOTES:

- CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING
- CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION
- SEE SHEET COO2 GENERAL NOTES FOR MORE INFORMATION.

CAUTION !!

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

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

REVISION SCHEDULE NO. DESCRIPTION DATE TAC & SWPPP COMMENTS | 03/16/2016 ACCESS DRIVE 04/13/2016 TAC COMMENTS 05/04/2016 ISSUED FOR CONSTRUCTION 06/13/2016

UTILITY COORDINATION | 08/03/2016

Project Number 2015.01923

GENERAL NOTES

C002

2015.01923.CE.C002.GN.dwg

A. GENERAL

- 1. EARTHWORK INCLUDES CLEARING, GRUBBING, SUBGRADE PREPARATION, REMOVAL OF TREES AND VEGETATION (INCLUDING STUMPS), PROTECTION OF TREES TO REMAIN, STRIPPING AND STORAGE OF TOPSOIL, FILL COMPACTION AND ROUGH GRADING OF ENTIRE SITE AS INDICATED ON DRAWINGS.
- 2. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.
- 3. CONTRACTOR SHALL PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFF THE SITE AS MAY BE NECESSARY TO PRODUCE THE GRADES REQUIRED AS SHOWN ON THE DRAWINGS. FILL OBTAINED FROM OFF SITE MUST BE SUITABLE SOIL AS DEFINED IN THE SPECIFICATIONS OR AS OTHERWISE APPROVED BY OWNER.
- 4. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS CURRENT STATE AND SHALL REMOVE ALL TRASH, RUBBISH, AND DEBRIS FROM THE SITE PRIOR TO STARTING EXCAVATION.
- 5. EXCEPT FOR STRIPPED TOPSOIL AND OTHER MATERIALS INDICATED TO BE STOCKPILED OR OTHERWISE REMAIN OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.
- 6. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, DRIVES, FACILITIES, ETC. WITHOUT OWNER PERMISSION OR AUTHORITY HAVING
- 7. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING EARTHWORK AND CLEARING OPERATIONS. EROSION CONTROL MEASURES SHOULD BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION.
- 8. CONTRACTOR SHALL CAREFULLY MAINTAIN ALL BENCHMARKS, MONUMENTS, AND OTHER REFERENCE POINTS. IF DISTURBED, CONTRACTOR SHALL ENGAGE LICENSED LAND SURVEY FOR REPLACEMENT OF REFERENCE POINTS.
- 9. WHERE THESE SPECIFICATIONS CONFLICT WITH THE CITY OF NOBLESVILLE STANDARDS, THE STANDARDS OF THE JURISDICTION HAVING AUTHORITY SHALL PREVAIL.
- 1. CONTRACTOR TO PROVIDE BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS.
- 2. SATISFACTORY (OR SUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM ACCORDING TO ASTM D2487, OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION AND OTHER DELETERIOUS MATERIAL
- 3. UNSATISFACTORY (OR UNSUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO ASTM D 2487, OR A COMBINATION OF THESE GROUPS. UNSATISFACTORY SOILS ALSO INCLUDES SATISFACTORY SOILS NOT MAINTAINED WITHÍN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION
- 1. CONTRACTOR SHALL LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE. DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER UNLESS PERMISSION IS GRANTED. NOTIFY OWNER
- 2. REMOVE OBSTRUCTIONS, TREES, SHRUBS, AND OTHER VEGETATION AS REQUIRED FOR NEW CONSTRUCTION. STRIP TOPSOIL TO DEPTH AS REQUIRED IN THE FIELD TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. STOCKPILE TOPSOIL AWAY FROM EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL AND GRADE STOCKPILES TO DRAIN SURFACE
- 3. REMOVE EXISTING ABOVE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND NECESSARY TO FACILITATE NEW CONSTRUCTION. C. EXECUTION 4. PROTECT SUBGRADES AND FOUNDATION SOILS FROM FREEZING TEMPERATURES, FROST, AND PONDING WATER.
- 5. EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS FOR ALL STRUCTURES, WALKS, PAVEMENTS, AND UTILITY TRENCHES.
- 6. CONTRACTOR SHALL FURNISH AND OPERATE ALL DEWATERING MEASURES REQUIRED TO FACILITATE NEW CONSTRUCTION AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- 6. PROOF ROLL SUBGRADE BELOW BUILDING PAVEMENTS WITH A PNEUMATIC—TIRED DUMP TRUCK TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF ROLL, WET OR SATURATED SUBGRADES, RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES AS DIRECTED BY ENGINEER OR OWNER REPRESENTATIVE, WITHOUT ADDITIONAL COMPENSATION.
- 7. BACKFILL ALL UTILITY TRENCHES BENEATH PAVEMENT (AND WITHIN 5') WITH GRANULAR MATERIAL.

AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.

- 8. SOIL FILL: USE SATISFACTORY SOIL MATERIAL UNDER ALL WALKS, PAVEMENTS, STEPS, RAMPS, BUILDING SLABS, FOOTINGS, AND FOUNDATIONS.
- 9. UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL SOIL LAYER BEFORE COMPACTION TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT. DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT EXCEEDS OPTIMUM MOISTURE CONTENT BY 2 PERCENT AND IS TOO WET TO COMPACT TO SPECIFIED UNIT WEIGH
- 10. COMPACTION OF SOIL BACKFILLS AND FILLS: COMPACT ALL FILL MATERIAL BELOW STRUCTURES, PAVEMENTS, WALKS, UTILITY TRENCHES, AND STEPS (AND WITHIN 5 FEET OF SAID AREAS) TO 98 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 (STANDARD PROCTOR DENSITY). COMPACT ALL FILL MATERIALS BELOW TURF OR UNPAVED AREAS TO 90 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 (STANDARD PROCTOR DENSITY). ALL FILL MATERIALS TO BE COMPACTED IN MAXIMUM 8-INCH LIFTS.
- 11. SITE ROUGH GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING. FINISH SUBGRADES TO REQUIRED ELEVATIONS WITHIN THE FOLLOWING TOLERANCES:
- I. TURF OR UNPAVED AREAS: PLUS OR MINUS 1 INCH II. WALKS: PLUS OR MINUS 1/2 INCH.
- III. PAVEMENTS: PLUS OR MINUS 1/2 INCH
- iv. Inside building lines: finish subgrade to a tolerance of 1 inch when tested with a 10-foot straightedge 12. QUALITY CONTROL: QUALIFIED GEOTECHNICAL ENGINEER TO BE ENGAGED AS TESTING AGENCY AS DIRECTED.
- 13. REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER.

A. GENERAL

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

B. PRODUCTS

- PE PIPE AND FITTINGS: PE DRAINAGE PIPE AND FITTINGS NP 3 TO NPS 10, AASHTO M 252M, TYPE S, WITH SMOOTH WATERWAY FOR COUPLING JOINTS. PE DRAINAGE PIPE AND FITTINGS NPS 12 TO NPS 60, AASHTO M 294M, TYPE S, WITH SMOOTH WATERWAY
- 2. PVC PIPE AND FITTINGS: PIPE: ASTM F 949, PVC, CORRUGATED PIPE WITH BELL AND SPIGOT ENDS FOR GASKETED JOINTS. FITTINGS: ASTM 949, PVC MOLDED OR FABRICATED, SOCKET TYPE. GASKETS: ASTM F 477, ELASTOMERIC SEALS.
- 3. CONCRETE PIPE AND FITTINGS: REINFORCED CONCRETE SEWER PIPE AND FITTINGS MEETING ASTM C 76 WITH BELL AND SPIGOT
- ENDS AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS. PIPE TO BE CLASS III UNLESS OTHERWISE INDICATED ON 4. COMPLY WITH ASTM C 1173, ELASTOMERIC SLEEVE—TYPE REDUCING OR TRANSITION COUPLING, FOR JOINTING UNDERGROUND NON-PRESSURE PIPING. INCLUDE ENDS OF SAME SIZES AS PIPING TO BE JOINED, AND CORROSION-RESISTANT METAL TENSION
- BAND AND TIGHTENING MECHANISM ON EACH END.
- 5. CLEANOUTS: CAST IRON CLEANOUTS: ASME A112.36.2M ROUND, GRAY-IRON HOUSING WITH CLAMPING DEVICE AND ROUND, SECURED, SCORIATED, GRAY-IRON COVER. HEAVY DUTY TOP LOADING IS REQUIRED. PLASTIC CLEANOUTS: PVC BODY WITH PVC
- 6. MANHOLES AND CATCH BASINS: STANDARD REINFORCED PRECAST CONCRETE MANHOLES MEETING ASTM C 478. MINIMUM 48-INCH DIAMETER UNLESS OTHERWISE INDICATED. BASE SECTION TO BE MINIMUM 6-INCH THICKNESS AND 4-INCH THICKNESS FOR WALLS AND BASE RISER SECTION, REINFORCED CONCRETE GRADE RINGS, 6-9 INCH TOTAL THICKNESS, TO MATCH DIAMETER OF MANHOLE FRAME AND COVER. MANHOLE FRAMES AND COVERS AS INDICATED ON DRAWINGS. PIPE CONNECTORS SHOULD BE PROVIDED TO MEET ASTM C293, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO THE BASE SECTION.
- 7. CONCRETE: CAST-IN-PLACE CONCRETE ACCORDING TO ACI 318 AND ACI 350/350R AND IN ACCORDANCE WITH THE FOLLOWING:
- 8. PORTLAND CEMENT DESIGN MIX: 4,000 PSI MINIMUM WITH 0.45 MAXIMUM WATER/CEMENTIOUS MATERIALS RATIO. REINFORCING FABRIC TO MEET ASTM A 185/A 185M, STEEL, WELDED WIRE FABRIC, PLAIN. REINFORCING BARS TO MEET ASTM A 615/A 615M,
- 9. MANHOLE CHANNELS TO BE FORMED WITH AN INVERT SLOPE OF 2 PERCENT THROUGH THE MANHOLE AND BENCHES AT 4 PERCENT, SLOPED TO DRAIN INTO CHANNEL.
- 10. INLETS: PROVIDE INLETS WITH HEAVY DUTY CASTINGS AS SHOWN ON DRAWINGS.
- 11. OUTLETS: CONCRETE END SECTION SHOULD BE PROVIDED AT ALL PIPE ENDS AND AS INDICATED ON DRAWINGS. RIP RAP APRONS TO BE INSTALLED AT ALL END SECTIONS TO DIMENSIONS INDICATED. AVERAGE RIP—RAP SIZE TO BE 6—INCHES UNLESS OTHERWISE INDICATED ON DRAWINGS.
- 1. INSTALL PIPING BEGINNING AT LOW POINT, TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. PLACE BELL ENDS OF PIPING FACING UPSTREAM. INSTALL GASKETS, SEALS, SLEEVES, AND OTHER COUPLINGS ACCORDING TO
- 2. WHEN INSTALLING PIPE UNDER STREETS OR OTHER OBSTRUCTIONS THAT CANNOT BE DISTURBED, USE PIPE-JACKING PROCESS OF
- MICRO-TUNNELING.
- 3. INSTALL PIPING PITCHED DOWN IN DIRECTION OF FLOW. INSTALL PE CORRUGATED SEWER PIPING IN ACCORDANCE WITH ASTM D 2231. INSTALL PVC PIPING ACCORDING TO ASTM D 2321 AND ASTM F 1668. INSTALL REINFORCED CONCRETE SEWER PIPING IN ACCORDANCE WITH ASTM C 1479 AND ACPA'S "CONCRETE PIPE INSTALLATION MANUAL."
- 4. PIPE JOINT CONSTRUCTION: JOIN CORRUGATED PE PIPE ACCORDING TO ASTM D 3212 FOR PUSH ON JOINTS. JOIN PVC CORRUGATED SEWER PIPING IN ACCORDANCE WITH ASTM D 2321 FOR ELASTOMERIC-SEAL JOINTS, JOIN REINFORCED CONCRETE PIPE ACCORDING TO ACPA'S "CONCRETE PIPE INSTALLATION MANUAL" FOR RUBBER-GASKETED JOINTS. JON DISSIMILAR PIPE
- MATERIALS WITH NON-PRESSURE TYPE FLEXIBLE COUPLINGS. 5. CONTRACTOR TO INSPECT INTERIOR OF PIPING AND MANHOLES FOR DEFECTS, DEFECTS REQUIRING CORRECTION INCLUDE THE
- ALIGNMENT: LESS THAN FULL DIAMETER OF INSIDE OF PIPE IS VISIBLE BETWEEN STRUCTURES DEFLECTION: FLEXIBLE PIPING WITH DEFLECTION THAT PREVENTS PASSAGE OF BALL OR CYLINDER OF SIZE NOT LESS THAN
- III. DAMAGE: CRUSHED, BROKEN, CRACKED, OR OTHERWISE DAMAGED PIPING. IV. INFILTRATION: WATER LEAKAGE INTO PIPING. v. EXFILTRATION: WATER LEAKAGE FROM OR AROUND PIPING

STORM SEWER (CONT.):

REPLACE DEFECTIVE PIPING USING NEW MATERIALS, AND REPEAT INSPECTION UNTIL DEFECTS ARE WITHIN ALLOWANCES 6. TEST NEW PIPING SYSTEMS, AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED, REPAIRED, FOR LEAKS AND DEFECTS. FOR GRAVITY FLOW STORM DRAINAGE PIPING: TEST ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, UNI-B-6, AND THE FOLLOWING: EXCEPTION: PIPING WITH SOILTIGHT JOINTS UNLESS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

OPTION: TEST PLASTIC PIPING ACCORDING TO ASTM F 1417 OPTION: TEST CONCRETE PIPING ACCORDING TO ASTM C 924

7. SUBMIT TESTING REPORTS AS REQUIRED BY OWNER OR AUTHORITY HAVING JURISDICTION.

ASPHALT PAVING:

1. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.

2. USE MATERIALS AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS.

B. PRODUCTS 1. AGGREGATES

- COURSE AGGREGATE: ASTM D 692/D92M, SOUND; ANGULAR CRUSHED STONE, CRUSHED GRAVEL, OR CURED, CRUSHED BLAST-FURNANCE SLAG. FINE AGGREGATE: ASTM D 1073 OR AASHTO M 29, SHARP-EDGED NATURAL SAND OR SAND PREPARED FROM STONE, GRAVEL, CURED BLAST-FURNANCE SLAG, OR COMBINATIONS THEREOF.

 G. FOR HOT-MIX ASPHALT, LIMIT NATURAL SAND TO A MAXIMUM OF 20 PERCENT BY WEIGHT OF THE
- MINERAL FILLER: ASTM D 242 OR AASHTO M 17, ROCK OR SLAG DUST, HYDRAULIC CEMENT, OR OTHER INERT
- 2. ASPHALT MATERIALS ASPHALT BINDER: AASHTO M 320, PG 64-22 (OR AS OTHERWISE RECOMMENDED BY INDOT STANDARDS)
 - ASPHALT CEMENT: PER INDOT STANDARDS
 CUTBACK PRIME COAT: PER INDOT STANDARDS
 EMULSIFIED ASPHALT PRIME COAT: PER INDOT STANDARDS
- TACK COAT: PER INDOT STANDARDS WATER: POTABLE. UNDERSEALING ASPHALT: ASTM D 3141; PUMPING CONSISTENCY.
- 3. AUXILIARY MATERIALS RECYCLED MATERIALS FOR HOT-MIX ASPHALT MIXES: RECLAIMED ASPHALT PAVEMENT; RECLAIMED, UNBOUND AGGREGATE BASE MATERIAL; AND RECYCLED ASPHALT SHINGLES FROM SOURCES AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS, EQUAL TO PERFORMANCE OF REQUIRED HOT-MIX
 - ASPHALT PAYING PRODUCED FROM ALL NEW MATERIALS. HERBICIDE: COMMERCIAL CHEMICAL FOR WEED CONTROL, REGISTERED BY THE EPA, AND NOT CLASSIFIED AS "RESTRICTED USE" FOR LOCATIONS AND CONDITIONS OF APPLICATION. PROVIDE IN GRANULAR, LIQUID, OR WETTABLE POWDER FORM SAND: ASTM D 1073 OR AASHTO M 29, GRADE NO. 2 OR NO. 3.
- RECYCLED CONTENT OF HOT-MIX ASPHALT: PER INDOT STANDARDS HOT-MIX ASPHALT: DENSE-GRADED, HOT-LAID, HOT-MIX ASPHALT PLANT MIXES APPROVED BY INDOT AND COMPLYING WITH THE FOLLOWING REQUIREMENTS: PROVIDE MIXES WITH A HISTORY OF SATISFACTORY PERFORMANCE IN GEOGRAPHICAL AREA WHERE
 - PROJECT IS LOCATED. b. BASE COURSE: 25.0 MM OR 19.0 MM (AS INDICATED ON DRAWINGS)

. EXAMINATION

4. MIXES

- VERIFY THAT SUBGRADE IS DRY AND IN SUITABLE CONDITION TO BEGIN PAVING. PROOF-ROLL SUBGRADE BELOW PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT OCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES. PROOFROLL TO BE PERFORMED BY QUALIFIED GEOTECHNICAL ENGINEER.
- COMPLETELY PROOF-ROLL SUBGRADE IN ONE DIRECTION LIMIT VEHICLE SPEED TO 3 MPH. PROOF ROLL WITH A LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS THAN 15
- EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS, AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY ENGINEER, AND REPLACE WITH COMPACTED BACKFILL OR FILL AS DIRECTED. PROCEED WITH PAVING ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED
- 2. SURFACE PREPARATION GENERAL: IMMEDIATELY BEFORE PLACING ASPHALT MATERIALS, REMOVE LOOSE AND DELETERIOUS MATERIAL FROM SUBSTRATE SURFACES. ENSURE THAT PREPARED SUBGRADE IS READY TO RECEIVE PAVING. HERBICIDE TREATMENT: APPLY HERBICIDE ACCORDING TO MANUFACTURER'S RECOMMENDED RATES AND WRITTEN APPLICATION INSTRUCTIONS. APPLY TO DRY, PREPARED SUBGRADE OR SURFACE OF COMPACTED-AGGREGATE BASE BEFORE APPLYING PAVING MATERIALS.
 - MIX HERBICIDE WITH PRIME COAT IF FORMULATED BY MANUFACTURER FOR THAT PURPOSE CUTBACK PRIME COAT: APPLY UNIFORMLY OVER SURFACE OF COMPACTED UNBOUND-AGGREGATE BASE COURSE AT A RATE OF 0.15 TO 0.50 GAL./SQ. YD. APPLY ENOUGH MATERIAL TO PENETRATE AND SEAL, BUT NOT FLOOD, SURFACE, ALLOW PRIME COAT TO CURE. IF PRIME COAT IS NOT ENTIRELY ABSORBED WITHIN 24 HOURS AFTER APPLICATION, SPREAD SAND OVER SURFACE TO BLOT EXCESS ASPHALT. USE ENOUGH SAND TO PREVENT PICKUP UNDER TRAFFIC. REMOVE LOOSE SAND BY SWEEPING BEFORE PAVEMENT IS PLACED AND AFTER VOLATILES HAVE
 - PROTECT PRIMED SUBSTRATE FROM DAMAGE UNTIL READY TO RECEIVE PAVING IV. TACK COAT: APPLY UNIFORMLY TO SURFACES OF EXISTING PAVEMENT AT A RATE OF 0.05 TO 0.15 GAL./SQ. YD. ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING.
 AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE
- SPILLAGES AND CLEAN AFFECTED SURFACES. 3. PLACING HOT-MIX ASPHALT MACHINE PLACE HOT-MIX ASPHALT ON PREPARED SURFACE, SPREAD UNIFORMLY, AND STRIKE OFF. PLACE ASPHALT MIX BY HAND IN AREAS INACCESSIBLE TO EQUIPMENT IN A MANNER THAT PREVENTS SEGREGATION OF MIX. PLACE FACH COURSE TO REQUIRED GRADE, CROSS SECTION, AND THICKNESS WHEN COMPACTED.
 - PLACE HOT-MIX ASPHALT BASE COURSE IN NUMBER OF LIFTS AND THICKNESSES INDICATED. PLACE HOT-MIX ASPHALT SURFACE COURSE IN SINGLE LIFT.

 SPREAD MIX AT A MINIMUM TEMPERATURE OF 250 DEG F

 BEGIN APPLYING MIX ALONG CENTERLINE OF CROWN FOR CROWNED SECTIONS AND ON HIGH SIDE OF
 - DNE-WAY SLOPES UNLESS OTHERWISE INDICATED. REGULATE PAVER MACHINE SPEED TO OBTAIN SMOOTH, CONTINUOUS SURFACE FREE OF PULLS AND TEARS IN ASPHALT-PAVING MAT.
 - PLACE PAYING IN CONSECUTIVE STRIPS NOT LESS THAN 10 FEET WIDE UNLESS INFILL EDGE STRIPS OF A LESSER AFTER FIRST STRIP HAS BEEN PLACED AND ROLLED. PLACE SUCCEEDING STRIPS AND EXTEND ROLLING TO OVERLAP PREVIOUS STRIPS. OVERLAP MIX PLACEMENT ABOUT 1 TO 1-1/2 INCHES FROM STRIP TO STRIP TO ENSURE PROPER COMPACTION OF MIX ALONG LONGITUDINAL JOINTS. b. COMPLETE A SECTION OF ASPHALT BASE COURSE BEFORE PLACING ASPHALT SURFACE COURSE.
 PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAVER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT—MIX ASPHALT TO PREVENT
- SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE. 4. JOINTS CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAYING SECTIONS. CONSTRUCT JOINTS FREE OF DEPRESSIONS, WITH SAME TEXTURE AND SMOOTHNESS AS OTHER SECTIONS OF HOT-MIX ASPHALT
 - CLEAN CONTACT SURFACES AND APPLY TACK COAT TO JOINTS. OFFSET LONGITUDINAL JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 6 INCHES OFFSET TRANSVERSE JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 24 INCHES
 - CONSTRUCT TRANSVERSE JOINTS AT EACH POINT WHERE PAVER ENDS A DAY'S WORK AND RESUMES WORK AT A SUBSEQUENT TIME, CONSTRUCT THESE JOINTS USING FITHER "BULKHEAD" OR "PAPERED" METHOD ACCORDING TO AI MS-22, FOR BOTH "ENDING A LANE" AND "RESUMPTION OF PAVING OPERATIONS. COMPACT JOINTS AS SOON AS HOT-MIX ASPHALT WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE
- COMPACT ASPHALT AT JOINTS TO A DENSITY WITHIN 2 PERCENT OF SPECIFIED COURSE DENSITY. 5. COMPACTION GENERAL: BEGIN COMPACTION AS SOON AS PLACED HOT-MIX PAVING WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. COMPACT HOT-MIX PAVING WITH HOT, HAND TAMPERS OR WITH VIBRATORY-PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS.
 - a. COMPLETE COMPACTION BEFORE MIX TEMPERATURE COOLS TO 185 DEG F BREAKDOWN ROLLING: COMPLETE BREAKDOWN OR INITIAL ROLLING IMMEDIATELY AFTER ROLLING JOINTS AND OUTSIDE EDGE. EXAMINE SURFACE IMMEDIATELY AFTER BREAKDOWN ROLLING FOR INDICATED CROWN, GRADE, IND SMOOTHNESS. CORRECT LAYDOWN AND ROLLING OPERATIONS TO COMPLY WITH REQUIREMENTS. INTERMEDIATE ROLLING: BEGIN INTERMEDIATE ROLLING IMMEDIATELY AFTER BREAKDOWN ROLLING WHILE HOT-MIX ASPHALT IS STILL HOT ENOUGH TO ACHIEVE SPECIFIED DENSITY. CONTINUE ROLLING UNTIL HOT-MIX ASPHALT
 - COURSE HAS BEEN UNIFORMLY COMPACTED TO THE FOLLOWING DENSITY:

 G. AVERAGE DENSITY: 96 PERCENT OF REFERENCE LABORATORY DENSITY ACCORDING TO ASTM D 6927 OR AASHTO T 245, BUT NOT LESS THAN 94 PERCENT OR GREATER THAN 100 PERCENT. AVERAGE DENSITY: 92 PERCENT OF REFERENCE MAXIMUM THEORETICAL DENSITY ACCORDING TO ASTM D 2041, BUT NOT LESS THAN 90 PERCENT OR GREATER THAN 96 PERCENT.
 - FINISH ROLLING: FINISH ROLL PAVED SURFACES TO REMOVE ROLLER MARKS WHILE HOT-MIX ASPHALT IS STILL EDGE SHAPING: WHILE SURFACE IS BEING COMPACTED AND FINISHED, TRIM EDGES OF PAVEMENT TO PROPER ALIGNMENT. BEVEL EDGES WHILE ASPHALT IS STILL HOT; COMPACT THOROUGHLY. REPAIRS: REMOVE PAVED AREAS THAT ARE DEFECTIVE OR CONTAMINATED WITH FOREIGN MATERIALS AND
 - REPLACE WITH FRESH, HOT-MIX ASPHALT. COMPACT BY ROLLING TO SPECIFIED DENSITY AND SURFACE VIII. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED VIII. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME
- 6. INSTALLATION TOLERANCES PAVEMENT THICKNESS: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN THE FOLLOWING TOLERANCES BASE COURSE: PLUS OR MINUS 1/2 INCH
 - SURFACE COURSE: PLUS 1/4 INCH NO MINUS. PAVEMENT SURFACE SMOOTHNESS: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS:
 - a. BASE COURSE: 1/4 INCH SURFACE COURSE: 1/8 INCH CROWNED SURFACES: TEST WITH CROWNED TEMPLATE CENTERED AND AT RIGHT ANGLE TO CROWN. MAXIMUM ALLOWABLE VARIANCE FROM TEMPLATE IS 1/4 INCH
- TESTING AGENCY: CONTRACTOR TO ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS. THICKNESS: IN-PLACE COMPACTED THICKNESS OF HOT-MIX ASPHALT COURSES WILL BE DETERMINED ACCORDING SURFACE SMOOTHNESS: FINISHED SURFACE OF EACH HOT-MIX ASPHALT COURSE WILL BE TESTED FOR COMPLIANCE WITH SMOOTHNESS TOLERANCES.
- IN-PLACE DENSITY: TESTING AGENCY WILL TAKE SAMPLES OF UNCOMPACTED PAVING MIXTURES AND COMPACTED PAVEMENT ACCORDING TO ASTM D 979 OR AASHTO T 168. REFERENCE MAXIMUM THEORETICAL DENSITY WILL BE DETERMINED BY AVERAGING RESULTS FROM FOUR SAMPLES OF HOT-MIX ASPHALT-PAVING MIXTURE DELIVERED DAILY TO SITE, PREPARED ACCORDING TO ASTM D 2041, AND COMPACTED ACCORDING TO JOB-MIX SPECIFICATIONS. IN-PLACE DENSITY OF COMPACTED PAVEMENT WILL BE DETERMINED BY TESTING CORE SAMPLES

ONE CORE SAMPLE WILL BE TAKEN FOR EVERY 1000 SQ. YD. OR LESS OF INSTALLED PAVEMENT, WITH NO FEWER

FIELD DENSITY OF IN-PLACE COMPACTED PAVEMENT MAY ALSO BE DETERMINED BY NUCLEAR METHOD ACCORDING TO ASTM D 2950 AND CORRELATED WITH ASTM D 1188 OR ASTM D 2726. REPLACE AND COMPACT HOT-MIX ASPHALT WHERE CORE TESTS WERE TAKEN I. REMOVE AND REPLACE OR INSTALL ADDITIONAL HOT-MIX ASPHALT WHERE TEST RESULTS OR MEASUREMENTS

ACCORDING TO ASTM D 1188 OR ASTM D 2726.

INDICATE THAT IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS.

CONCRETE PAVING:

- 1. CONCRETE PAVING SECTION INCLUDES DRIVEWAYS, ROADWAYS, PARKING LOTS, CURBS AND GUTTERS, WALKS, AND
- PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
 - CIRCUMSTANCES WARRANT ADJUSTMENTS. MATERIAL TEST REPORTS: FROM A QUALIFIED TESTING AGENCY INDICATING AND INTERPRETING TEST RESULTS FOR COMPLIANCE OF THE FOLLOWING WITH REQUIREMENTS INDICATED, BASED ON
- 3. QUALITY ASSURANCE READY-MIX-CONCRETE MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING
- PRODUCTION FACILITIES AND EQUIPMENT. ACI PUBLICATIONS: COMPLY WITH ACI 301 (ACI 301M) UNLESS OTHERWISE INDICATED.
- INTO FLAT SHEETS. III. DEFORMED-STEEL WELDED WIRE REINFORCEMENT: ASTM A 497/A 497M, FLAT SHEET.
- (GALVANIZED) AFTER FABRICATION ACCORDING TO ASTM A 767/A 767M, CLASS I COATING, CUT BARS TRUE D LENGTH WITH ENDS SQUARE AND FREE OF BURRS. VIII. BAR SUPPORTS: BOLSTERS, CHAIRS, SPACERS, AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCING BARS, WELDED WIRE REINFORCEMENT, AND DOWELS IN PLACE. MANUFACTURE BAR SUPPORTS ACCORDING TO CRSI'S "MANUAL OF STANDARD PRACTICE" FROM STEEL WIRE, PLASTIC, OR PRECAST CONCRETE OF GREATER COMPRESSIVE STRENGTH THAN CONCRETE SPECIFIED.
- FLY ASH: ASTM C 618, CLASS C OR CLASS F. GROUND GRANULATED BLAST-FURNACE SLAG: ASTM C 989, GRADE 100 OR 120. NORMAL-WEIGHT AGGREGATES: ASTM C 33, UNIFORMLY GRADED, AND AS FOLLOWS: COMBINED AGGREGATE GRADATION: WELL GRADED FROM COARSEST TO FINEST WITH NOT MORE THAN 18 PERCENT AND NOT LESS THAN 8 PERCENT RETAINED ON A INDIVIDUAL SIEVE, EXPECT THAT LESS THAN 8 PERCENT MAY BE RETAINED ON COARSEST SIEVE AND ON NO. 50 SIEVE, AND LESS THAN 8 PERCENT MAY BE RETAINED ON SIEVES FINER THAN NO. 50.
- AIR—ENTRAINING ADMIXTURE: ASTM C 260.

 CHEMICAL ADMIXTURES: ADMIXTURES CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES AND TO CONTAIN NOT MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF
- DEFINED IN ACI 347-04. 3. CURING MATERIALS I. ABSORPTIVE COVER: AASHTO M 182, CLASS 3, BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING
- APPROXIMATELY 9 OZ./SQ. YD. (305 G/SQ. M) DRY. MOISTURE-RETAINING COVER: ASTM C 171, POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE SHEET.
- TO FRESH CONCRETE. v. CLEAR, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 1, CLASS B,
- 4. FIBER REINFORCEMENT

vi. WHITE, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 2, CLASS B,

- PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING FIBERMESH 150; PROPEX CONCRETE SYSTEMS CORP., STEALTH FIBER MICRO REINFORCEMENT; SI CONCRETE SYSTEMS, OR APPROVED EQUAL
- JOINT FILLERS: ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER OR ASTM D 1752, CORK OR SELF-EXPANDING CORK IN PREFORMED STRIPS.

 II. PENETRATING ANTI-SPALLING SEALER: THE SEALER SHALL BE A SILANE WATER BASED COMPOUND WHICH HAS A 96% CHLORIDE-ION SCREEN AND A REPELLENCY FACTOR OF 92% WHEN TESTED IN ACCORDANCE WITH NCHRP #244, TEST METHOD. IN ADDITION, THE SEALER-TREATED CONCRETE MUST EXHIBIT NO SCALING WHEN EXPOSED TO 120 CYCLES OF FREEZING—AND—THAWING IN g. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE
- 6. CONCRETE MIXTURES
 - FOLLOWING PROPERTIES: a. COMPRESSIVE STRENGTH (28 DAYS): 4000 PSI (27.6 MPA). MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO AT POINT OF PLACEMENT: 0.45.
- SLUMP LIMIT: 5 INCHES (125 MM), PLUS OR MINUS 1 INCH (25 MM). AIR CONTENT: 6.5 PERCENT PLUS OR MINUS 1.5 PERCENT. II. CHEMICAL ADMIXTURES: USE ADMIXTURES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ACCORDING TO ASTM C 94/C 94M. FURNISH BATCH CERTIFICATES FOR EACH BATCH DISCHARGED AND USED IN THE WORK 1. EXAMINATION AND PREPARATION
- 2. EDGE FORMS AND SCREED CONSTRUCTION SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.
- GENERAL: COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.
- II. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVING UNLESS PAVING TERMINATES AT ISOLATION JOINTS.
- CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, OTHER FIXED OBJECTS, AND WHERE INDICATED. CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST

ONE-FOURTH OF THE CONCRETE THICKNESS.

SPREADING SURFACE TREATMENTS.

- 5. CONCRETE PLACEMENT MOISTEN SUBBASE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED. COMPLY WITH ACI 301 (ACI 301M) REQUIREMENTS FOR MEASURING, MIXING, TRANSPORTING, PLACING,

- 7. CONCRETE PROTECTION AND CURING GENERAL: PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD
- OR HOT TEMPERATURES. COMPLY WITH ACI 306.1 FOR COLD-WEATHER PROTECTION.
- EVAPORATION RETARDER: APPLY EVAPORATION RETARDER TO CONCRETE SURFACES IF HOT, DRY, OR WINDY CONDITIONS CAUSE MOISTURE LOSS APPROACHING 0.2 LB/SQ. FT. X H (1 KG/SQ. M X H) BEFORE AND DURING FINISHING OPERATIONS. APPLY ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AFTER PLACING, SCREEDING, AND BULL FLOATING OR DARBYING CONCRETE BUT
- BEGIN CURING AFTER FINISHING CONCRETE BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE.
- CURING METHODS: CURE CONCRETE BY MOISTURE CURING, MOISTURE—RETAINING—COVER CURING CURING COMPOUND, OR A COMBINATION OF THESE PENETRATING, ANTI-SPALLING SEALER TREATMENT: APPLY COMPOUNDS TO CLEAN, DRY CONCRETE SURFACES FREE OF OIL, DIRT, AND OTHER FOREIGN MATERIAL ACCORDING TO MANUFACTURER'S
- SPECIFICATIONS. SEALER TO BE APPLIED TO ALL EXTERIOR CONCRETE PAVING AND CURBS AFTER CONCRETE HAS CURED 28 DAYS.

- I. COMPLY WITH TOLERANCES IN ACI 117 AND AS FOLLOWS: ELEVATION: 3/4 INCH (19 MM).
- THICKNESS: PLUS 3/8 INCH (10 MM), MINUS 1/4 INCH (6 MM). SURFACE: GAP BELOW 10-FOOT- (3-M-) LONG, UNLEVELED STRAIGHTEDGE NOT TO EXCEED 1/2 INCH (13 MM).
- d. JOINT SPACING: 3 INCHES (75 MM). CONTRACTION JOINT DEPTH: PLUS 1/4 INCH (6 MM), NO MINUS.
- JOINT WIDTH: PLUS 1/8 INCH (3 MM), NO MINUS. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE MARKINGS OF DIMENSIONS INDICATED WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE A

MINIMUM WET FILM THICKNESS OF 15 MILS (0.4 MM). 9. REPAIRS AND PROTECTION

- REMOVE AND REPLACE CONCRETE PAVING THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION. REMOVE WORK IN COMPLETE SECTIONS FROM JOINT TO JOINT UNLESS OTHERWISE APPROVED BY ENGINEER.
 PROTECT CONCRETE PAYING FROM DAMAGE, EXCLUDE TRAFFIC FROM PAYING FOR AT LEAST 14
- DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN PAVING AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGE OF MATERIALS AS THEY OCCUR. MAINTAIN CONCRETE PAVING FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP PAVING NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

INDY NE LODGING **ASSOCIATES, LLC**

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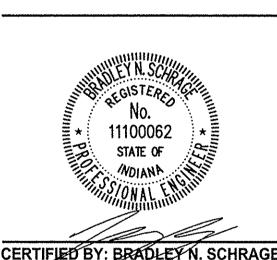
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ISSUANCE INDEX DATE: 11/30/2015 **PROJECT PHASE: CONSTRUCTION DOCUMENTS**

REVISION SCHEDULE NO. DESCRIPTION DATE TAC & SWPPP COMMENTS | 03/16/2016 ACCESS DRIVE 04/13/2016 TAC COMMENTS 05/04/2016 ISSUED FOR CONSTRUCTION 06/13/2016 UTILITY COORDINATION 08/03/2016

Project Number

SPECIFICATIONS

C003

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WATER & SANITARY SPECIFICATIONS NOTE;

FOR WATER SPECIFICATIONS. REFER TO CITY OF NOBLESVILLE STANDARDS FOR SANITARY SPECIFICATIONS.

REFER TO INDIANA AMERICAN WATER STANDARDS

CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION

CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH

OF EXISTING UTILITIES PRIOR TO COMMENCING ANY

CONSTRUCTION. CONTACT ENGINEER IF VARIATION

SEE SHEET COO2 GENERAL NOTES FOR MORE INFORMATION.

CAUTION !! THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES

GENERAL NOTES:

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

> "811" OR 1-800-382-5544 INDIANA UNDERGROUND -

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A. GENERAL

OTHER ACTION SUBMITTALS

a. DESIGN MIXTURES: FOR EACH CONCRETE PAVING MIXTURE. INCLUDE ALTERNATE DESIGN MIXTURES WHEN CHARACTERISTICS OF MATERIALS PROJECT CONDITIONS, WEATHER, TEST RESULTS, OR OTHER

COMPREHENSIVE TESTING OF CURRENT MATERIALS.

READY-MIXED CONCRETE PRODUCTS AND THAT COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR AND FEDERAL AMERICANS WITH DISABILITIES ACT (ADA).

HANDICAP STANDARDS: PROVIDE RAMPS INDICATED FOR HANDICAP ACCESS IN ACCORDANCE WITH ANSI A117

1. STEEL REINFORCEMENT RECYCLED CONTENT: POST CONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT NOT LESS THAN 25 PERCENT.

PLAIN-STEEL WELDED WIRE REINFORCEMENT: ASTM A 185/A 185M, FABRICATED FROM AS-DRAWN STEEL WIRE

v. REINFORCING BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420); DEFORMED. PLAIN-STEEL WIRE: ASTM A 82/A 82M, AS DRAWN. i. DEFORMED-STEEL WIRE: ASTM A 496/A 496M. ii. DOWEL BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420) PLAIN-STEEL BARS; ZINC COATED

CEMENTITIOUS MATERIAL: USE THE FOLLOWING CEMENTITIOUS MATERIALS, OF SAME TYPE, BRAND, AND SOURCE THROUGHOUT PROJECT: a. PORTLAND CEMENT: ASTM C 150, PORTLAND CEMENT TYPE !

USE CRUSHED LIMESTONE COARSE AGGREGATE FOR CONCRETE EXPOSED TO WEATHER. WATER: POTABLE AND COMPLYING WITH ASTM C 94/C 94M.

vi. NOTE: WHERE CLASS A, B, OR C CONCRETE IS REFERENCE IN PLANS OR SPECIFICATIONS, THE CLASS IS AS

EVAPORATION RETARDER: WATERBORNE, MONOMOLECULAR, FILM FORMING, MANUFACTURED FOR APPLICATION

FIBROUS REINFORCEMENT: 100% VIRGIN HOMOPOLYMER POLYPROPYLENE MULTIFILAMENT FIBERS FOR SECONDARY REINFORCEMENT OF CONCRETE, ASTM C 116, TYPE III. SHALL CONTAIN NO REPROCESSED

FOLLOWING: "WEATHER WORKER HEAVY-DUTY WB (J-27 WB)"; DAYTON SUPERIOR CORP.

'ENVIROSEAL 20"; HYDROZO INCORP., "PENTANE WB"; L & M CONSTRUCTION CHEMICALS,

PREPARE DESIGN MIXTURES, PROPORTIONED ACCORDING TO ACI 301 (ACI 301M), WITH THE

7. CONCRETE MIXING

READY-MIXED CONCRETE: MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE

PROOF—ROLL PREPARED SUBBASE SURFACE BELOW CONCRETE PAYING TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. I. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING

CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE. 3. STEEL REINFORCEMENT

GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGES TRUE TO LINE, WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED.

AND AT LOCATIONS WHERE PAVING OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR III. ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING

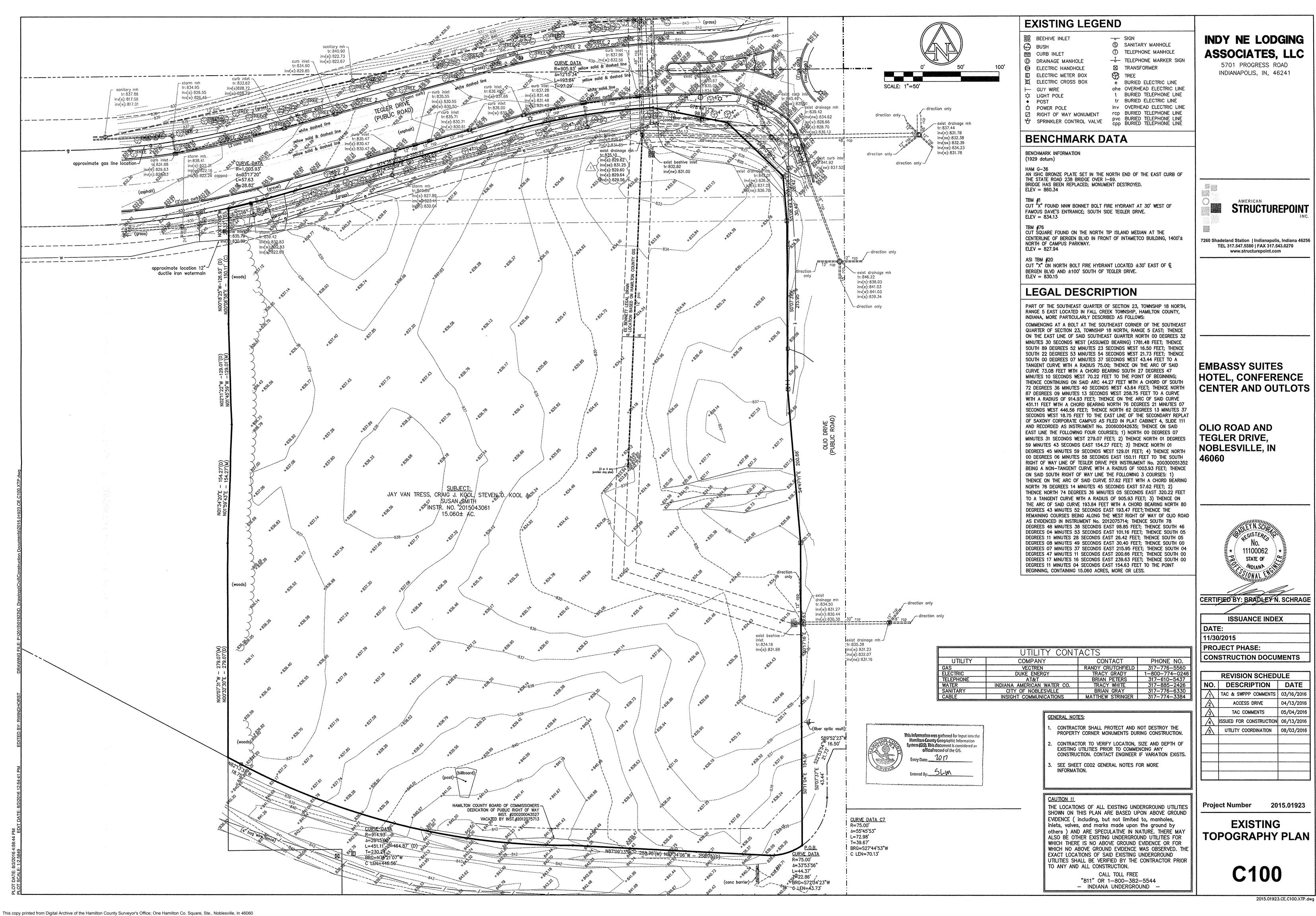
EDGING: AFTER INITIAL FLOATING, TOOL EDGES OF PAVING, GUTTERS, CURBS, AND JOINTS IN CONCRETE WITH AN EDGING TOOL TO A 1/4-INCH (6-MM) RADIUS, REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE EDGING-TOOL MARKS ON CONCRETE SURFACES.

AND CONSOLIDATING CONCRETE. DEPOSIT AND SPREAD CONCRETE IN A CONTINUOUS OPERATION BETWEEN TRANSVERSE JOINTS. DO NOT PUSH OR DRAG CONCRETE INTO PLACE OR USE VIBRATORS TO MOVE CONCRETE INTO PLACE. SCREED PAVING SURFACE WITH A STRAIGHTEDGE AND STRIKE OFF COMMENCE INITIAL FLOATING USING BULL FLOATS OR DARBIES TO IMPART AN OPEN-TEXTURED AND UNIFORM SURFACE PLANE BEFORE EXCESS MOISTURE OR BLEED WATER APPEARS ON THE SURFACE.

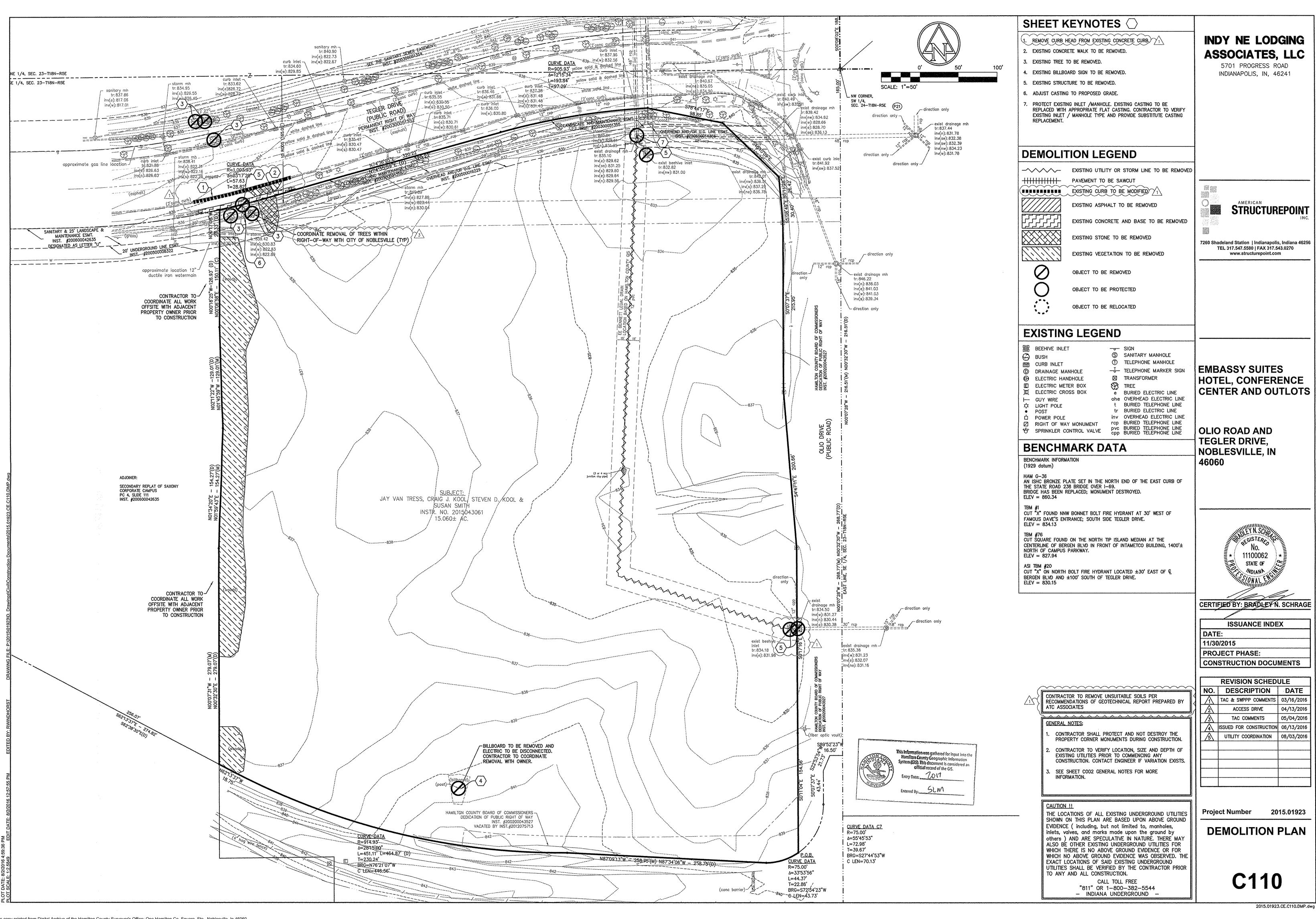
DO NOT FURTHER DISTURB CONCRETE SURFACES BEFORE BEGINNING FINISHING OPERATIONS OR

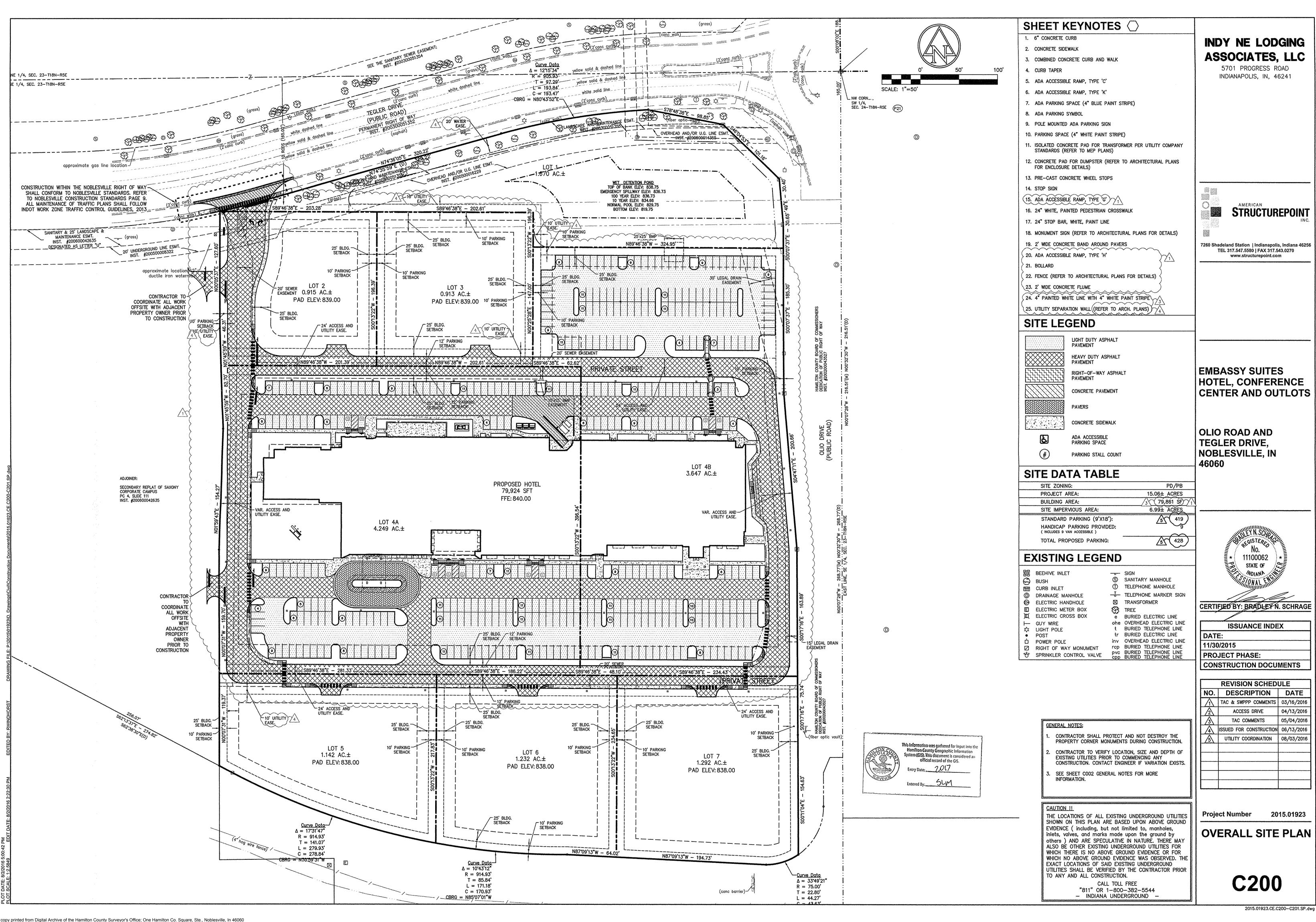
II. FINE AGGREGATE: ASTM C 33, SAND . COARSE AGGREGATE: ASTM C 33, CRUSHED GRAVEL

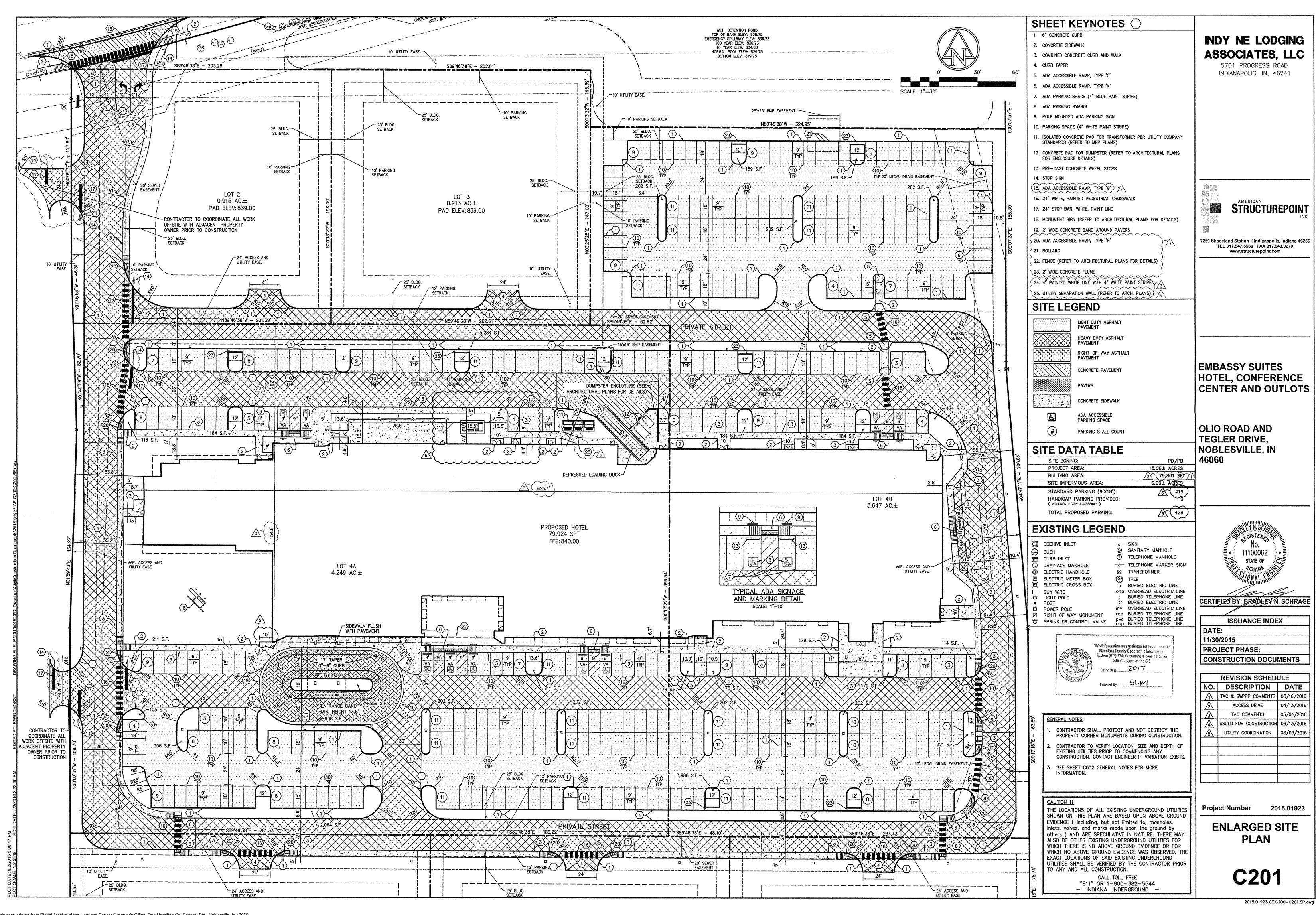
92.5 PERCENT OF PIPING DIAMETER.

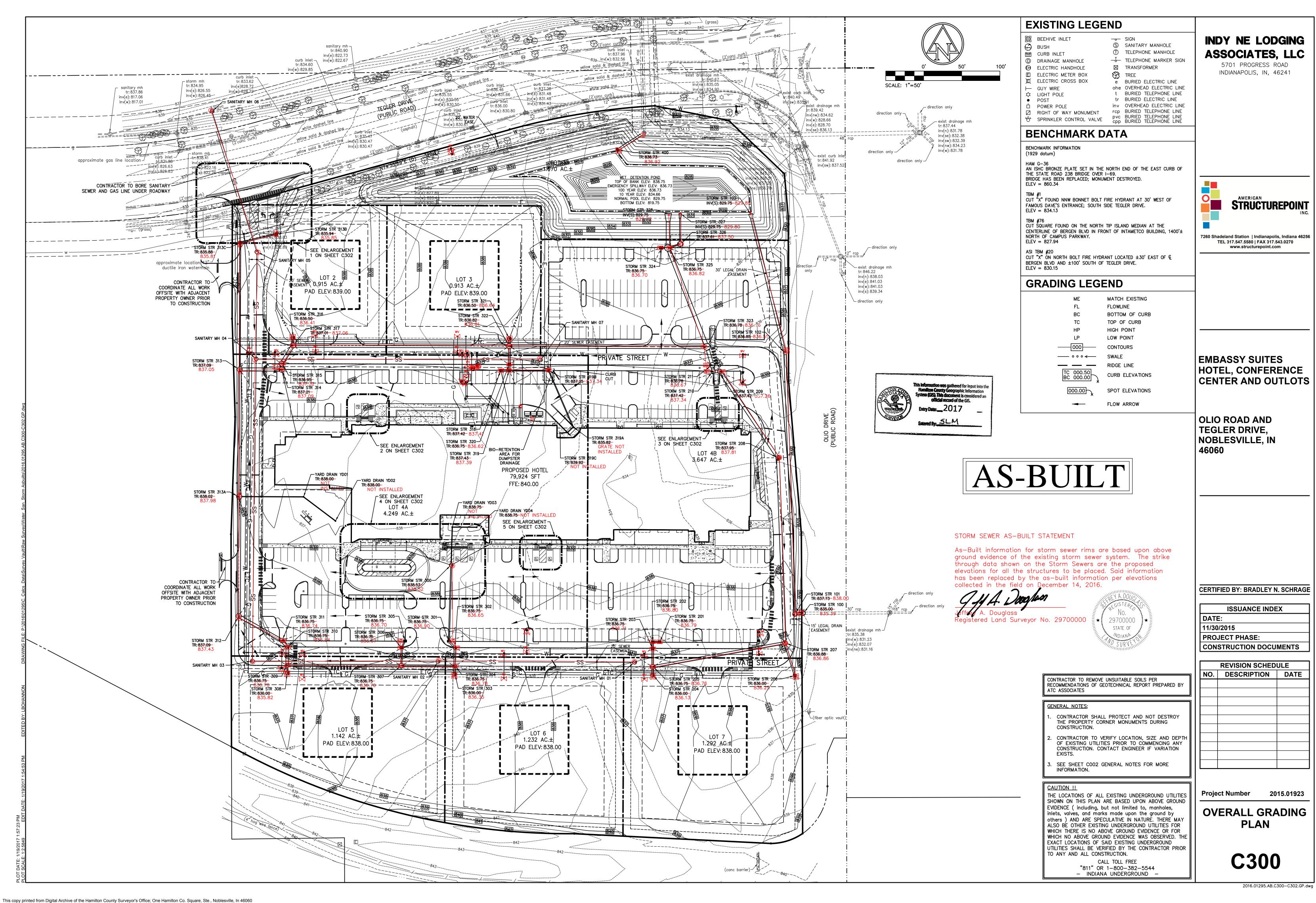


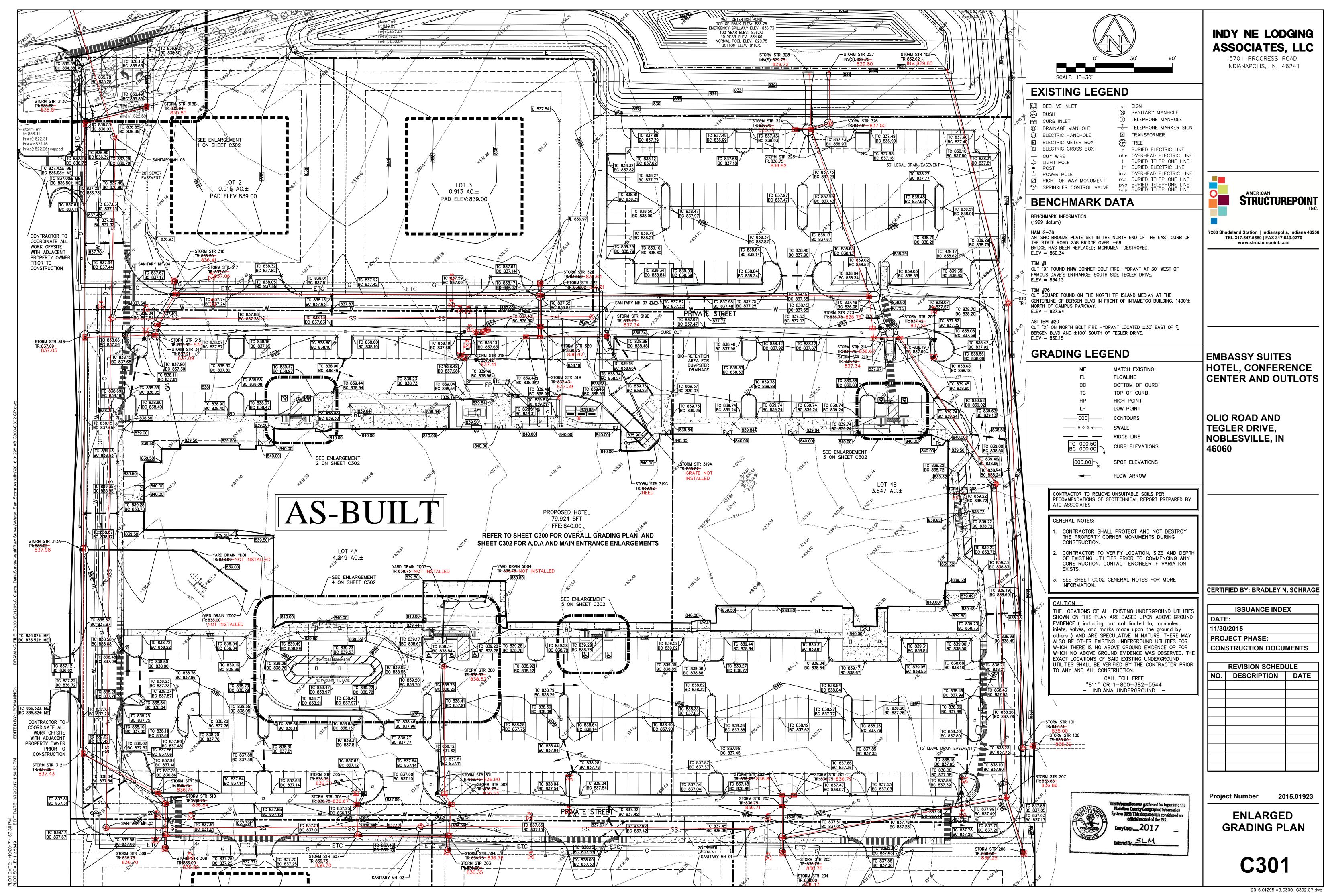
	REVISION SCHED	ULE
NO.	DESCRIPTION	DATE
1	TAC & SWPPP COMMENTS	03/16/2016
2	ACCESS DRIVE	04/13/2016
3	TAC COMMENTS	05/04/2016
4	ISSUED FOR CONSTRUCTION	06/13/2016
5	UTILITY COORDINATION	08/03/2016

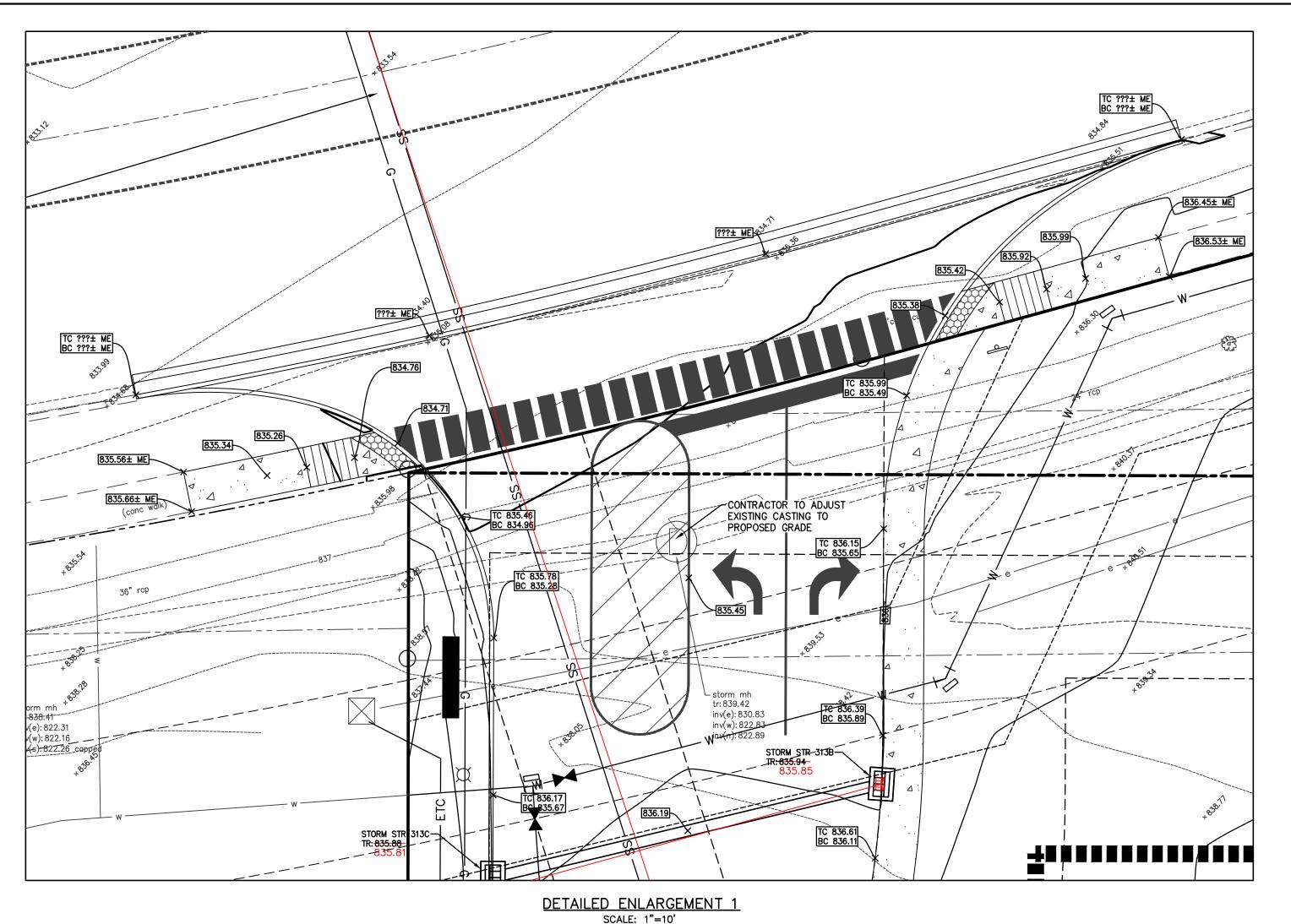


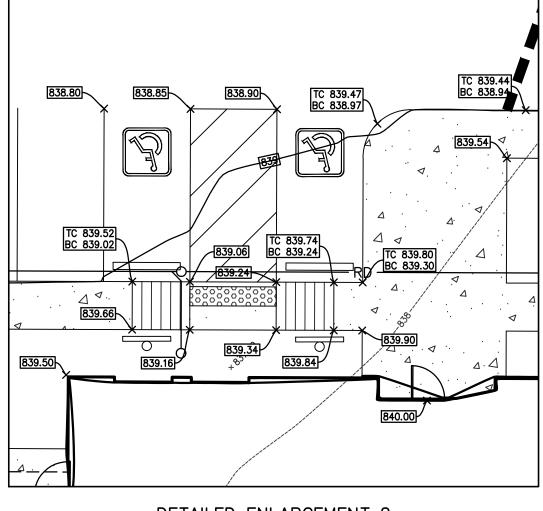






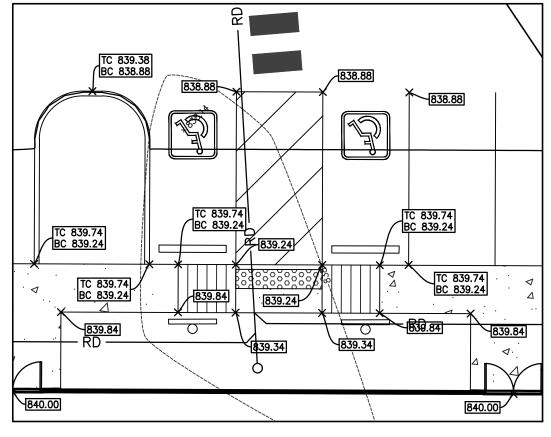






DETAILED ENLARGEMENT 2

SCALE: 1"=10'



DETAILED ENLARGEMENT 3

SCALE: 1"=10'

EXISTING LEGEND

BEEHIVE INLET

BUSH

CURB INLET

DRAINAGE MANHOLE

ELECTRIC HANDHOLE

ELECTRIC METER BOX

ELECTRIC CROSS BOX

SANITARY MANHOLE

TELEPHONE MANHOLE

TRANSFORMER

TREE

BURIFD FLECTRIC LINF

E ELECTRIC METER BOX
ELECTRIC CROSS BOX
E BURIED ELECTRIC LINE
Ohe OVERHEAD ELECTRIC LINE
USE BURIED TELEPHONE LINE
BURIED TELEPHONE LINE
TO BURIED TELEPHONE LINE
OVERHEAD ELECTRIC LINE
OVERHEAD ELECTRIC LINE
INV OVERHEAD ELECTRIC LINE
FOR BURIED TELEPHONE LINE
SPRINKLER CONTROL VALVE
CPP BURIED TELEPHONE LINE
CPP BURIED TELEPHONE LINE
CPP BURIED TELEPHONE LINE

BENCHMARK DATA

BENCHMARK INFORMATION (1929 datum)

ELEV = 830.15

HAM G-36
AN ISHC BRONZE PLATE SET IN THE NORTH END OF THE EAST CURB OF THE STATE ROAD 238 BRIDGE OVER I-69.
BRIDGE HAS BEEN REPLACED; MONUMENT DESTROYED.

CUT "X" FOUND NNW BONNET BOLT FIRE HYDRANT AT 30' WEST OF FAMOUS DAVE'S ENTRANCE; SOUTH SIDE TEGLER DRIVE.

ELEV = 834.13

TBM #76
CUT SQUARE FOUND ON THE NORTH TIP ISLAND MEDIAN AT THE
CENTERLINE OF BERGEN BLVD IN FRONT OF INTAMETCO BUILDING, 1400'±
NORTH OF CAMPUS PARKWAY.
ELEV = 827.94

ASI TBM #20
CUT "X" ON NORTH BOLT FIRE HYDRANT LOCATED ±30' EAST OF ©
BERGEN BLVD AND ±100' SOUTH OF TEGLER DRIVE.

GRADING LEGEND

ME MATCH EXISTING

FL FLOWLINE

BC BOTTOM OF CURB

TC TOP OF CURB

HP HIGH POINT

LP LOW POINT

CONTOURS

WALE

RIDGE LINE

TC 000.50

BC 000.00

CURB ELEVATIONS

SPOT ELEVATIONS

FLOW ARROW

EMBASSY SUITES HOTEL, CONFERENCE

CENTER AND OUTLOTS

INDY NE LODGING

ASSOCIATES, LLC

5701 PROGRESS ROAD

INDIANAPOLIS, IN, 46241

STRUCTUREPOINT

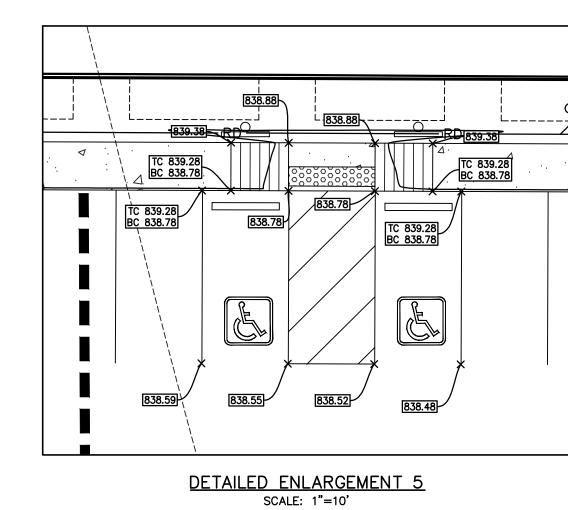
7260 Shadeland Station | Indianapolis, Indiana 46256

TEL 317.547.5580 | FAX 317.543.0270

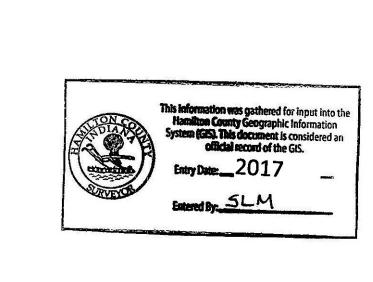
www.structurepoint.com

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN 46060

AS-BUILT



SCALE: 1"=10'



GENERAL NOTES:

- CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
- CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION
- 3. SEE SHEET COO2 GENERAL NOTES FOR MORE

INFORMATION.

CAUTION !!

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

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

CERTIFIED BY: BRADLEY N. SCHRAGE

ISSUANCE INDEX
DATE:
11/30/2015
PROJECT PHASE:
CONSTRUCTION DOCUMENTS

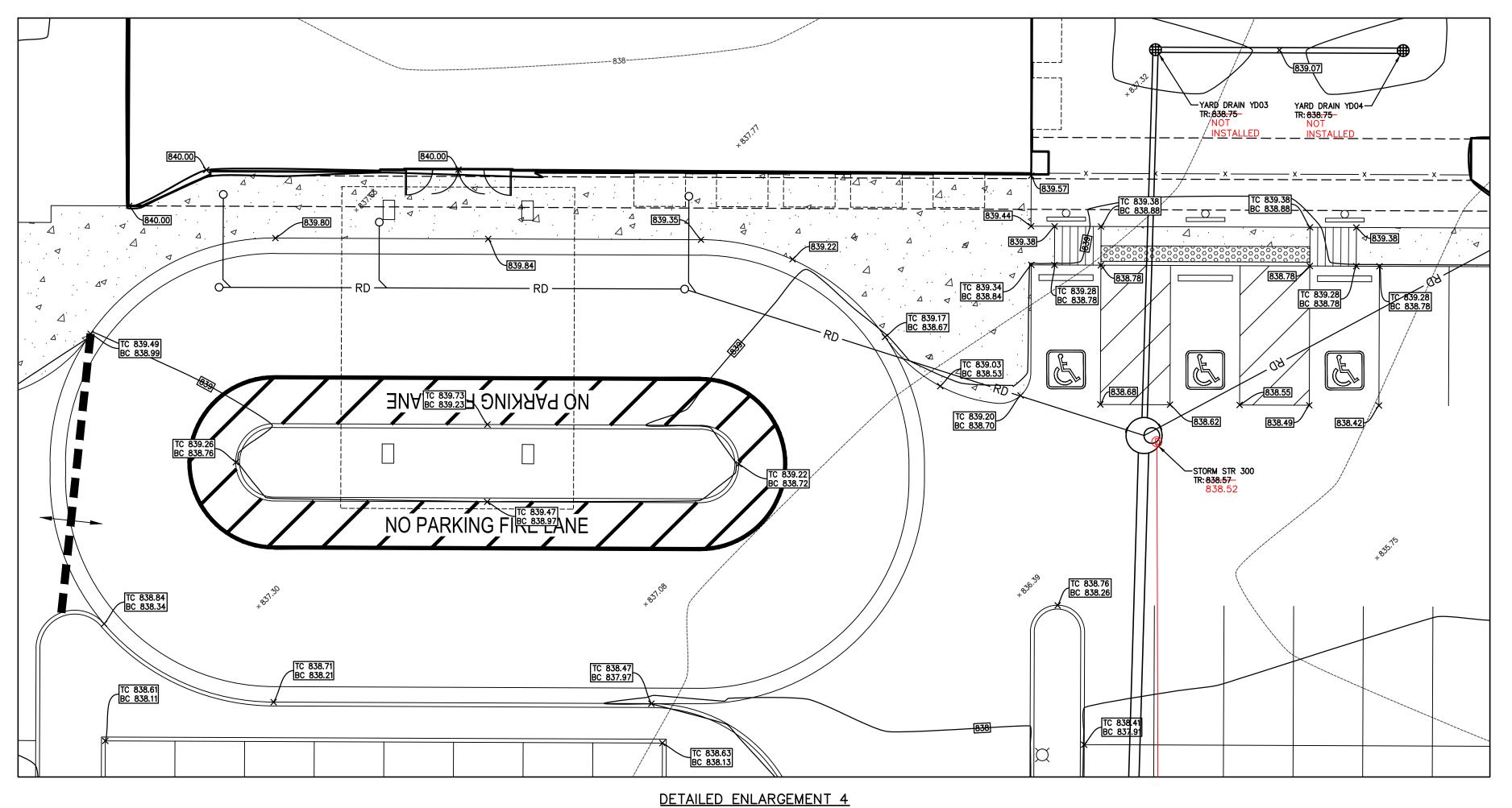
REVISION SCHEDULE

	•	
Ю.	DESCRIPTION	DATE

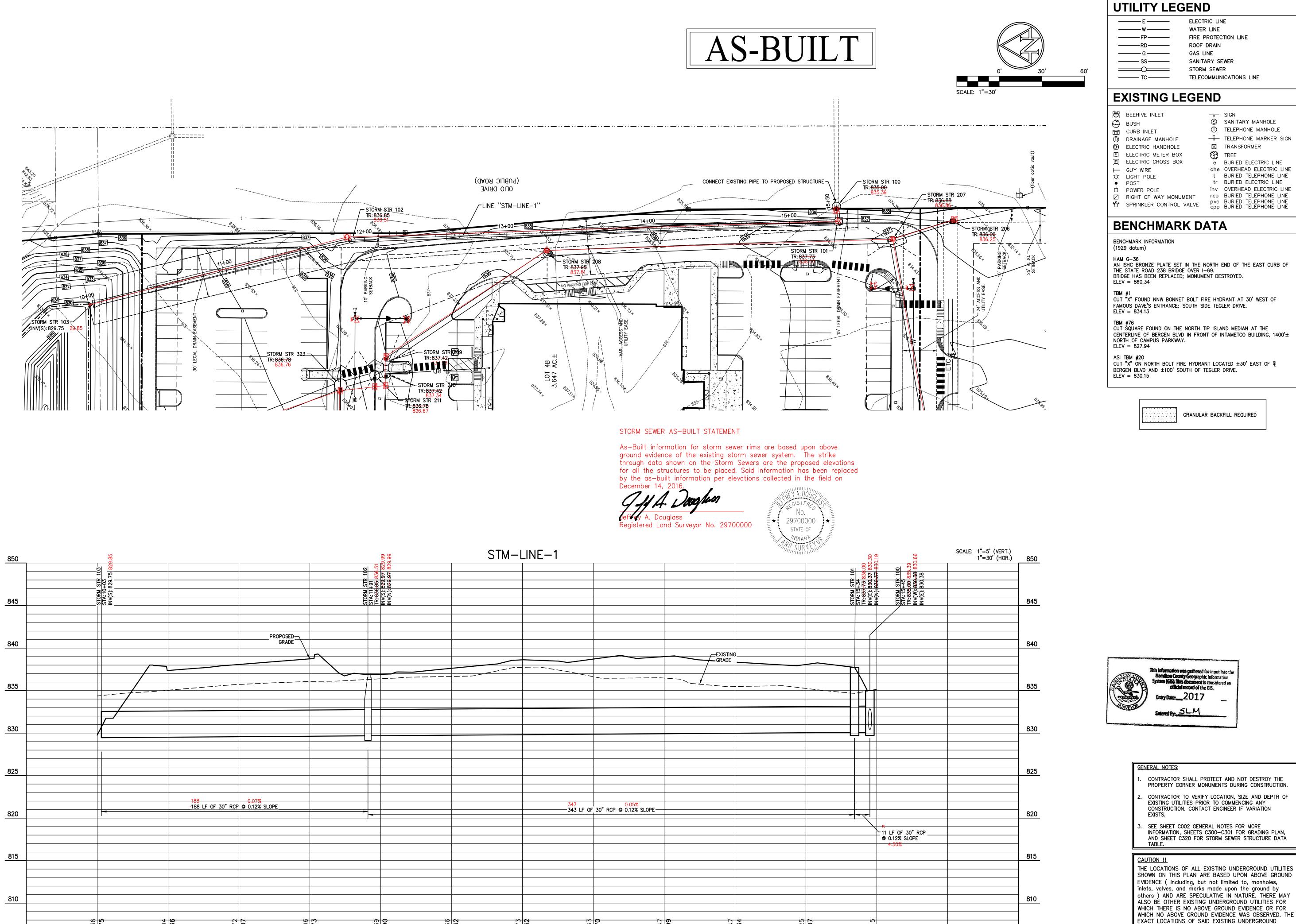
Project Number 2015.01923

DETAILED ENLARGEMENTS GRADING PLAN

C302



SCALE: 1"=10'



14+00

INDY NE LODGING

ASSOCIATES, LLC 5701 PROGRESS ROAD

INDIANAPOLIS, IN, 46241

CENTERLINE OF BERGEN BLVD IN FRONT OF INTAMETCO BUILDING, 1400'±

UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR

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

– INDIANA UNDERGROUND –

TO ANY AND ALL CONSTRUCTION.

805

16+00

15+00

STRUCTUREPOINT

7260 Shadeland Station | Indianapolis, Indiana 46256 TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN

CERTIFIED BY: BRADLEY N. SCHRAGE

ISSUANCE INDEX DATE: 11/30/2015 PROJECT PHASE: CONSTRUCTION DOCUMENTS

REVISION SCHEDULE			
NO.	DESCRIPTION	DATE	

LEGAL DRAIN **RELOCATION PLAN** & PROFILE

Project Number 2015.01923

C310

2016.01295.AB.C310.LDRPP.dwg

11+00

12+00

13+00

10+00

				TORM STRUCTURE DATA TABLE BE LABELED "DUMP NO WAST		TO WATER	RWAY"		
STR. NO.	STRUCTURE / CASTING TYPE	T.O.R.	INCOMING PIPE DATA (DIRECTION) / [FROM STR]	OUTGOING PIPE DATA (DIRECTION) / [TO STR]	OUTGOING	OUTGOING PIPE SIZE	OUTGOING GRADE (%)	CONNECT TO STRUCT	REMARKS
100	TYPE "J" MANHOLE / R-4342	835.39 835.00	30" RCP 830.38 (E) EX.	30" RCP 830.38 (W) [101]830.66	8 -11'-	30"	4.50 -0.12%	101	
101	TYPE "J" MANHOLE / R-1772	838.00 837.73	30" RCP 830.37 (E) [100] <mark>830.3</mark>	,,,,,	347	30"	0.06 -0.12%-	102	
102	TYPE "C" MANHOLE / R-1772	836.51 836.85	30" RCP 829.97 (S) [101] <mark>829.9</mark>	· · · · ·	188	30"	0.07 -0.12%-	103	
103	Concrete End Section	555.55	30" RCP 829.75 (S) [102] <mark>829.8</mark>		100		011270	1.00	DEBRIS GUARD REQUIRED
201	TYPE "J" INLET / R-3287-SB10	836.79 836.75	00 No. 020.70 (0) [102] 020.0	15" RCP 831.81 (W) [202] 832.19	9'-	15"	2.11 -0.25%	202	DEBITIO CONTRO NEGOTIED
202	TYPE "M" INLET / R-3287-SB10	836.80 836.75	15" RCP 831.79 (E) [201] 832.0		8	18"	1.25 -0.20%	203	
203	TYPE "M" INLET / R-3287-SB10	836.71 836.75	18" RCP 831.77 (N) [202] 831.8 1	21" RCP 831.77 (S) [205] 831.76	24	21"	0.42 -0.20%	205	
	TYPE "C" MANHOLE / R-4342	836.13 836.00	10 KCF 031.77 (N) [202] 631.0	21" RCP 831.75 (N) [205]832.28	12	21"	2.00 -0.20%		
204	·	836.76	21" RCP 831.72 (N) [203] <mark>831.6</mark> 6	, , ,	177	21	0.08	205	
205	TYPE "J" MANHOLE / R-3287-SB10	836.75	21" RCP 831.72 (N) [203] 831.00 21" RCP 831.72 (S) [204] 832.0	30" RCP 831.72 (E) [207]831.66	176'	30"	0.20%	207	FLAT TOP REQUIRED
206	TYPE "E" INLET / R-4215-C	836.25 836.00		18" RCP 831.46 (N) [207] <mark>831.75</mark>	46 -45'-	18"	0.06 -0.20%	207	
207	TYPE "J" MANHOLE / R-3472	836.86 836.88	30" RCP 831.37 (W) [205] 831.51	36" RCP 831.37 (N) [208] <mark>831.46</mark>	244 243'	36"	0.18 -0.20% -	208	
	,	837.81	18" RCP 831.37 (S) [206] 831.46	, , ,					
208	TYPE "J" MANHOLE / R-3472	837.95 837.26	36" RCP 830.88 (S) [207] <mark>831.0</mark> 1	36" RCP 830.88 (NW) [209]830.9	20	36"	0.15 - 0.20% - 0.80	209	
209	TYPE "J" MANHOLE / R-3287-SB10	837.42	36" RCP -830.61 (SE) [208]830.7	,,,,,	20 9'	36"	-0.20%	210	FLAT TOP REQUIRED
210	TYPE "J" MANHOLE / R-3287-SB10	837.34 837.42	36" RCP 830.59 (E) [209] <mark>830.5</mark> 12" HDPE 830.59 (SW) _{RD 30.4}	36" RCP 830.59 (N) [211] <mark>830.5</mark> 2	2 -8'-	36"	-1.43 - 0.20% -	211	FLAT TOP REQUIRED
211	TYPE "K" MANHOLE / R-3287-SB10	836.67 836.78	36" RCP 830.58 (S) [210] <mark>830.6</mark>		26 7 -25	42"	-0.15 -0.20%-	323	FLAT TOP REQUIRED
	, , , , , , , , , , , , , , , , , , , ,	838.52	8" PVC SDR 35 833.56 (N) [YD03] N	,,,,		,-	0.81		TENT TO REGUINES
300	TYPE "C" MANHOLE / R-1772	838.95	6" HDPE 835.08 (W) RD 8" HDPE 832.91 (NE) RD	12" RCP -832.91 (S) [301] 833.6 5	99 100'	12"	-0.35% -	301	
301	TYPE "C" MANHOLE / R-3287-SB10	836.90 836.75	12" RCP 832.56 (N) [300] <mark>832.8</mark>	18" RCP 832.56 - (SE) [302] 832.8	9 0 -12'-	18"	-1.11 -0.25%	302	FLAT TOP REQUIRED
302	TYPE "C" MANHOLE / R-3287-SB10	836.65 836.75	18" RCP 832.53 (NW) [301] <mark>832.9</mark>		25	18"	0.76 -0.20%	304	FLAT TOP REQUIRED
303	TYPE "C" MANHOLE / R-4342	836.35 836.00	`	21" RCP 832.50 (N) [304] <mark>832.89</mark>	12	21"	0.92 -0.20%	304	TEAT TO REGUINED
	<u> </u>	836.78	18" RCP 832.48 (N) [302] <mark>832.3</mark>		71		0.35		
304	TYPE "C" MANHOLE / R-3287-SB10	836.75	21" RCP 832.48 (S) [303] 832.7	24" RCP 832.48 (W) [307] <mark>832.70</mark>	70'	24"	-0.20%	307	FLAT TOP REQUIRED
305	TYPE "J" INLET / R-3287-SB10	836.75		12" RCP 832.44 (SW) [306] <mark>832.5</mark>	0.5	12"	- 0.35%	306	
306	TYPE "J" INLET / R-3287-SB10	836.75	12" RCP 832.40 (NE) [305] <mark>832.4</mark>	7 15" RCP 832.40 (S) [307]832.32	2 -24'-	15"	-0.52 - 0.25%	307	
307	TYPE "J" MANHOLE / R-3287-SB10	836.70 836.75	15" RCP 832.34 (N) [306] 832.4 24" RCP 832.34 (E) [304] 832.4	30" RCP 832.34 (W) [309]8 <mark>32.4</mark> 0	149 150'	30"	0.13 -0.15%-	309	FLAT TOP REQUIRED
308	TYPE "C" MANHOLE / R-4342	835.82 836.00	24 Noi 652.54 (L) [564]652.4	15" RCP 832.14 (N) [309]832.33	11 7 -10'-	15"	0.64 -0.25%	309	
309	· · · · · · · · · · · · · · · · · · ·	836.70 836.75	30" RCP 832.12 (E) [307] <mark>832.2</mark>	76" DOD 970 10 (N) [710] 970 15	25	36"	0.04 -0.15%-	310	FLAT TOD DECLUDED
	TYPE "C" MANHOLE / R-3287-SB10	836.84 836.75	15" RCP 832.12 (S) [308] 832.3		9		-2.22		FLAT TOP REQUIRED
310	•	836.74	36" RCP 832.08 (S) [309] 832.14	36" RCP 832.08 (NW) [311]832.0	67	36"	-0.15%- -0.15%-	311	FLAT TOP REQUIRED
311	TYPE "J" MANHOLE / R-3287-SB10	836.75 837.43	36" RCP 832.06 (SE) [310]832.2		160	36"	-0.15%- -0.15%- -0.15%-	312	FLAT TOP REQUIRED
312	TYPE "K" MANHOLE / R-3287-SB10	837.09 837.50	36" RCP 831.97 (SE) [311]832.18			42"	0.38	313A	FLAT TOP REQUIRED
313	TYPE "K" MANHOLE / R-3287-SB10	837.09	42" RCP 831.48 (S) [313A] <mark>831.8</mark> 12" RCP 831.58 (N) [313C] <mark>831.9</mark>	42" RCP -831.48 (E) [314] 831.8 0	55 -55'	42"	- 0.15 %-	314	FLAT TOP REQUIRED
313A	TYPE "K" MANHOLE / R-3010	837.98 838.02	42" RCP 831.73 (S) [312] <mark>832.0</mark> 8" PVC SDR 35 831.73 (E) [YD01]	42" RCP 831.73 (N) [313]832.03	164 167'	42"	0.11 - 0.15%-	313	
313B	TYPE "J" INLET / R-3287-10V	835.85 835.94	832.08	12" RCP 832.44 (W) [313C]832.5		12"	0.06 -0.35%	313C	
313C	TYPE "M" INLET / R-3287-10V	835.88	12" RCP 832.26 (E) [313B] <mark>832.4</mark>	7 12" RCP 832.16 (S) [313] <mark>832.36</mark>	166 167	12"	-0.35%	313	
314	TYPE "K" MANHOLE / R-3287-SB10	837.09 837.21	42" RCP 831.40 (W) [313] 831.59 12" HDPE 831.40 (S) RD 31.64	42" RCP 831.40 (N) [315]831.54	7 -8'-	42"	-11.00 -0.15%	315	FLAT TOP REQUIRED
315	TYPE "K" MANHOLE / R-3287-SB10	837.32 836.95	42" RCP -831.38 (S) [314] 832.3	42" RCP -831.39- (NE) [317] <u>832.2</u>	29 1 -28'-	42"	2.41 -0.15%-	317	
316	TYPE "C" MANHOLE / R-4342	836.41 836.50	42 ((3) 651.55 (3) [614] 652.5	15" RCP 831.36 (S) [317] 831.41	10	15"	-1.40 -0.15%	317	FLAT TOP REQUIRED
	·	837.06	42" RCP 831.34 (SW) [315] <mark>831.5</mark>			15	0.13%	317	
317	TYPE "K" MANHOLE / R-3287-SB10	837.01	15" RCP 831.34 (N) [316] 831.55	48" RCP 831.34 (E) [322] 83 1.46	284 284'	48"	-0.15 %	322	FLAT TOP REQUIRED
318	TYPE "J" INLET / R-3287-SB10	837.42	12" HDPE 832.49 (S) RD <u>32.58</u>	21" RCP 832.49 (E) [319] <mark>832.56</mark>	-11'-	21"	-0.20%	319	
319	TYPE "M" INLET / R-3287-SB10	837.39 837.43	21" RCP 832.47 (W) [318] <mark>832.5</mark> 12" RCP -832.47 (E) [319B] <mark>832.5</mark>	4 4 24" RCP 832.47 (N) [320]832.52	7 2 -8' -	24"	1.43 - 0.20%-	320	
319A	TRENCH DRAIN	835.82	12 1101 002.17 (2) [0100] 002.0	12" PVC SDR 35 833.46 (NW) [319B]	-81'-	12"	-1.00%-	319B	GRATE NOT INSTALLED/PIPE ONLY
	TYPE "A" INLET / R-3405		832.64 12" PVC SDR 35 832.65 (SE) [319A]	12" RCP 832.65 (W) [319]832.59	52	12"	0.10 -0.35%	319	ONTE NOT INCOMEEDY IT E ONE!
319B 319C	ADS 2499CGS 24" ADS2824 Basin	839.92	. 2 3 SSI, GO GOZ.GO (GE) [SIBA]	6" HDPE 833.56 (E) [319A]	-10'	6"	-1.00%-	013	NOT INSTALLED
	TYPE "M" INLET / R-3287-SB10	836.62 836.75	24" RCP 832.46 (S) [319] 832.4	,,,,	25	24"	1.12 -0.20%	322	NOT INSTALLED
320 321	TYPE "C" MANHOLE / R-4342	836.64 836.50	21 No. 002.70 (3) [018] 832.4	24" RCP 830.94 (N) [322]830.94	9	24"	0.33 -0.20%	322	
322	TYPE 'K" MANHOLE / R-3287-SB10	831.71 836.82	48" RCP 830.92 (W) [317] 830.8 24" RCP 831.91 (S) [320] 831.7	48" RCP - 830.92 (E) [323]830.81	256	48"	0.14 -0.15%	323	FLAT TOP REQUIRED
323	TYPE "L" MANHOLE / R-3287-SB10	836.76 836.78	24" RCP 830.92 (N) [321] 830.9 48" RCP 830.53 (W) [322] 830.4		138 140'	48"	2.82 -0.15%-	325	FLAT TOD DESCRIPT
525	TYPE "J" INLET / R-3287-SB10	836.70	42" RCP 830.53 (S) [211] 830.6	15" RCP 832.34 (E) [325]832.35	12		4.00		FLAT TOP REQUIRED
704		836.75 836.82	40" DOD 670 70 (0) [707] 070 5	.,,	43	15"	-0.26% -0.93	325	FLAT TOP REQUIRED
324	T/DE #1 # 14411101 - /	1 070 75	48" RCP 830.32 (S) [323] <mark>830.2</mark> 15" RCP 832.32 (W) [324] <mark>831.8</mark>	2 48" RCP 830.32 (N) [328] <mark>830.12</mark> 7 18" PVC SDR 35 830.32 (E) [326]	-45' -17'- 16	48" 18"	-1.26% -1.00% –	328 1.23 326	FLAT TOP REQUIRED SEE DETAIL
324 325	TYPE "L" MANHOLE / R-3287-SB10 DIVERSION STRUCTURE	836.75	15 RCP 832.32 (W) [324]831.8	₩ 4/1 4 /	40	1	2.75		TOP OF WATER = 830.90
	TYPE "L" MANHOLE / R-3287-SB10 DIVERSION STRUCTURE AQUASWIRL AS-8	836.75 837.50 837.61	15 RCP 832.32 (W) [324] 831.8 18" PVC SDR 35 830.15 (W) [325]	18" PVC SDR 35 830.15 (N) [327]	40'	18"	-1.00%-	327	NO PIPES VISIBLE
325	DIVERSION STRUCTURE	837.50		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-40'	18"	-1.00%-	327	
325 326	DIVERSION STRUCTURE AQUASWIRL AS-8	837.50	18" PVC SDR 35- 830.15 (W) [325]	29.80	40'-	18"	-1.00%-	327	NO PIPES VISIBLE
325 326 327	DIVERSION STRUCTURE AQUASWIRL AS-8 Concrete End Section	837.50	18" PVC SDR 35 830.15 (W) [325] 18" PVC SDR 35 829.75 (S) [326] 8	29.80	38	18"	-1.00% -0.20%	401	NO PIPES VISIBLE DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED
325 326 327 328	DIVERSION STRUCTURE AQUASWIRL AS-8 Concrete End Section Concrete End Section	837.50 -837.61 836.92	18" PVC SDR 35 830.15 (W) [325] 18" PVC SDR 35 829.75 (S) [326] 8	29.80 2 24" RCP 829.75 (NE) [401] 829.3	38				DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED INVERT TO BOTTOM OF STRUCTURE
325 326 327 328	DIVERSION STRUCTURE AQUASWIRL AS-8 Concrete End Section Concrete End Section OUTLET CONTROL STRUCTURE	837.50 -837.61 836.92	18" PVC SDR 35 830.15 (W) [325] 18" PVC SDR 35 829.75 (S) [326] 8 48" RCP 829.75 (S) [325] 829.7 24" RCP 829.67 (SW) [400] 829.8	29.80 2 24" RCP 829.75 (NE) [401] 829.3	38 32 -41'	24"		401	DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED INVERT TO BOTH MATER CORE OPENING
325 326 327 328 400 YD01	DIVERSION STRUCTURE AQUASWIRL AS-8 Concrete End Section Concrete End Section OUTLET CONTROL STRUCTURE EX OUTLET STRUCTURE YARD DRAIN 01	837.50 -837.61 836.92 836.73	18" PVC SDR 35 830.15 (W) [325] 18" PVC SDR 35 829.75 (S) [326] 8 48" RCP 829.75 (S) [325] 829.7	29.80 24" RCP 829.75 (NE) [401] 829.3 8" PVC SDR 35 832.57 (W) [313A]	38 32 41' -85'		-0.20%		DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED INVERT TO BOTH OF STRUCTURE CORE OPENING NOT INSTALLED
325 326 327 328 400	DIVERSION STRUCTURE AQUASWIRL AS—8 Concrete End Section Concrete End Section OUTLET CONTROL STRUCTURE EX OUTLET STRUCTURE	837.50 -837.61 836.92 -836.73	18" PVC SDR 35 830.15 (W) [325] 18" PVC SDR 35 829.75 (S) [326] 8 48" RCP 829.75 (S) [325] 829.7 24" RCP 829.67 (SW) [400] 829.8	29.80 2 24" RCP 829.75 (NE) [401] 829.3	38 32 -41'	24"	-0.20% -1.00%	401 313A	DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED DEBRIS GUARD REQUIRED INVERT TO BOTTOM OF STRUCTURE CORE OPENING

EXISTING LEGEND

BEEHIVE INLET **⇔** BUSH CURB INLET

S SANITARY MANHOLE TELEPHONE MANHOLE D DRAINAGE MANHOLE

-- SIGN

(E) ELECTRIC HANDHOLE E ELECTRIC METER BOX ₹%} TREE 直 ELECTRIC CROSS BOX e BURIED ELECTRIC LINE ohe OVERHEAD ELECTRIC LINE ├─ GUY WIRE

t BURIED TELEPHONE LINE POST tr BURIED ELECTRIC LINE inv OVERHEAD ELECTRIC LINE ☐ POWER POLE RIGHT OF WAY MONUMENT | rcp BURIED TELEPHONE LINE SPRINKLER CONTROL VALVE pvc BURIED TELEPHONE LINE cpp BURIED TELEPHONE LINE

INDY NE LODGING **ASSOCIATES, LLC**

5701 PROGRESS ROAD INDIANAPOLIS, IN, 46241

BENCHMARK DATA

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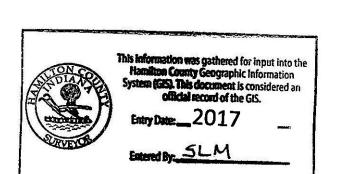
7260 Shadeland Station | Indianapolis, Indiana 46256 TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN

AS-BUILT

CERTIFIED BY: BRADLEY N. SCHRAGE



ISSUANCE INDEX DATE: 11/30/2015 PROJECT PHASE: CONSTRUCTION DOCUMENTS

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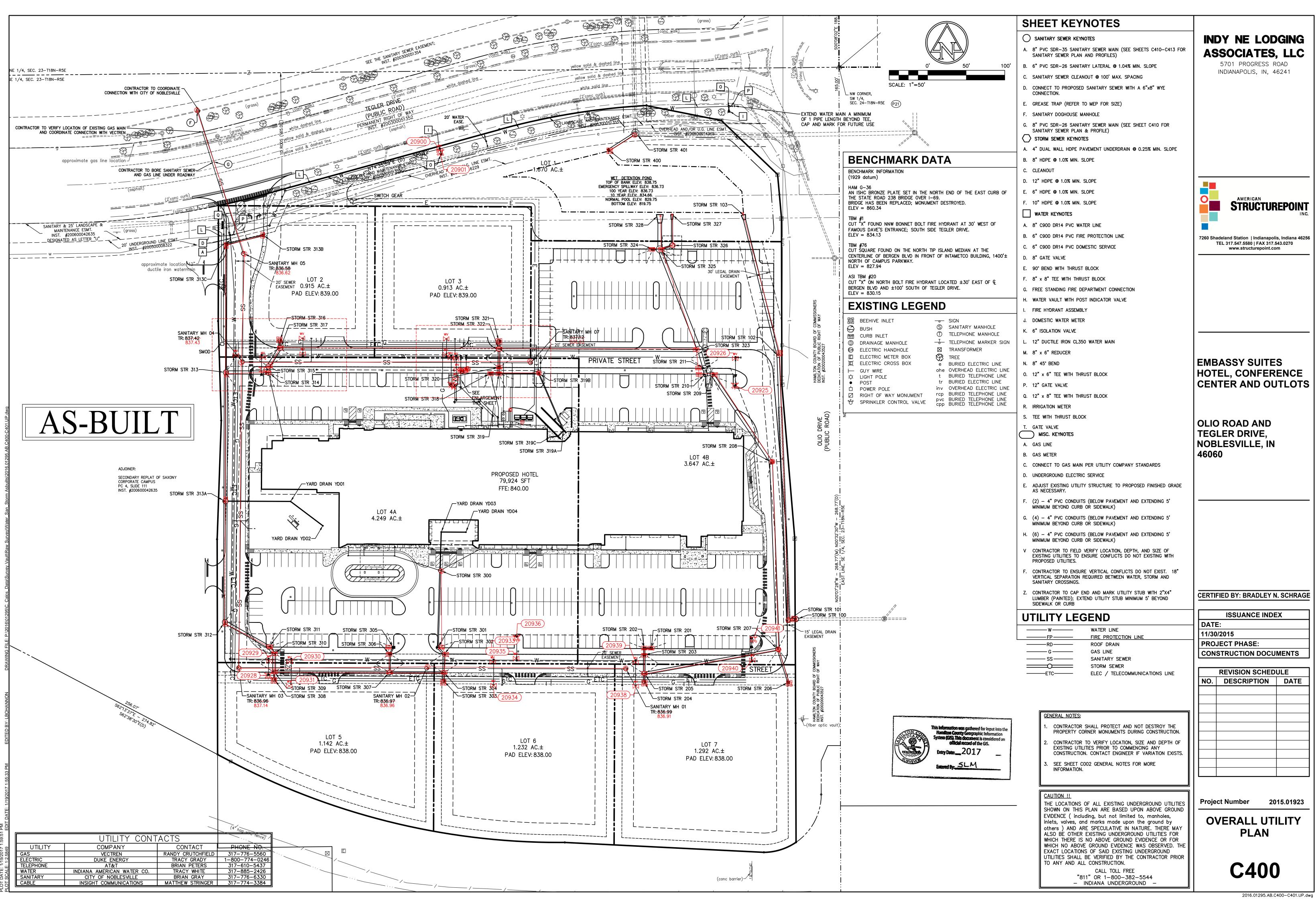
CALL TOLL FREE "811" OR 1-800-382-5544 INDIANA UNDERGROUND — **Project Number** 2015.01923

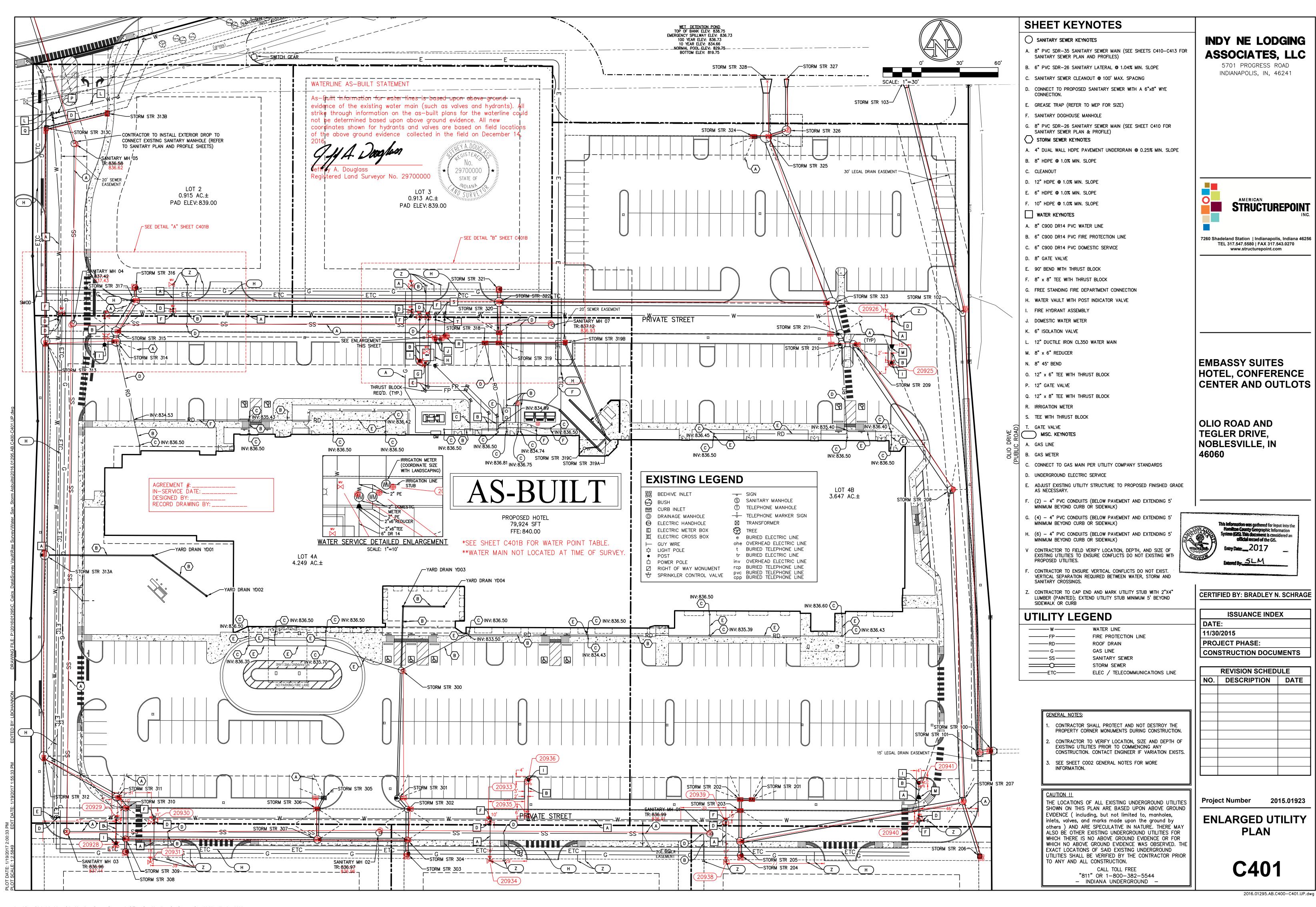
STORM SEWER **STRUCTURE DATA TABLE**

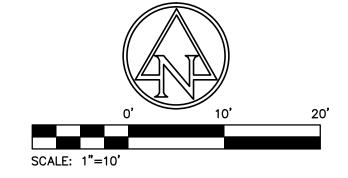
STORM SEWER AS-BUILT STATEMENT

As-Built information for storm sewer rims are based upon above ground evidence of the existing storm sewer system. The strike through data shown on the Storm Sewers are the proposed elevations for all the structures to be placed. Said information has been replaced by the as—built information per elevations

collected in the field on December 14, 2016. 29700000 STATE OF









RECORD DRAWING

WATERLINE AS-BUILT STATEMENT

20909

– ETC ├──

20905

W W 24

DETAIL "A"

DETAIL "B"

As—Built information for water lines is based upon above ground evidence of the existing water main (such as valves and hydrants). All strike through information on the as—built plans for the waterline could not be determined based upon above ground evidence. All new coordinates shown for hydrants and valves are based on field locations of the above ground evidence collected in the field on December 14,

Registered Land Surveyor No. 29700000

29700000

STATE OF

Local Coordinates			
Point #	Description	Northing	Easting
20941	FHY	29441.3440	37855.6320
20940	WV	29413.7140	37854.3750
20939	WV	29410.7140	37702.8550
20938	WV	29379.9980	37703.1970
20936	FHY	29443.1070	37548.4500
20935	WV	29416.1090	37547.8360
20934	WV	29380.8960	37518.5050
20933	WV	29411.4420	37517.3970
20931	WV	29380.1880	37253.3720
20930	WV	29411.5870	37253.9910
20929	WV	29412.6410	37227.6910
20928	FHY	29394.2330	37226.1440
20926	WV	29805.3040	37832.1350
20925	FHY	29770.5670	37831.7030
20921	FDC	29770.0210	37466.9050
20920	FHY	29771.7400	37463.9410
20919	WTR VAULT	29777.8570	37466.7310
20918	PIV	29779.0750	37469.1570
20917	WV	29791.2320	37471.2500
20916	WM	29789.3310	37475.6770
20915	WM	29789.7220	37481.3420
20914	WM	29791.1950	37484.8850
20913	WV	29805.5910	37469.8400
20912	WV	29806.2480	37463.1130
20911	W∨	29830.6660	37457.0590
20910	WV	29810.4380	37456.6950
20909	W∨	29811.2370	37270.8790
20908	WV	29831.5390	37269.9370
20907	WV	29806.4890	37219.2460
20906	W∨	29809.3660	37184.0560
20905	FHY	29791.3540	37218.6890
20901	FHY	30073.2580	37449.4660
20000	\A/\ /	7007E 7000	77449 6200

AGREEMENT #:_ IN-SERVICE DATE: _____ DESIGNED BY: _____ RECORD DRAWING BY: ____

EXISTING LEGEND

20900 WV 30075.3820 37448.6200

- BEEHIVE INLET € BUSH
- CURB INLET
- D DRAINAGE MANHOLE E ELECTRIC HANDHOLE E ELECTRIC METER BOX
- 直 ELECTRIC CROSS BOX ── GUY WIRE
- C LIGHT POLE POST ☐ POWER POLE ☑ RIGHT OF WAY MONUMENT ∜ SPRINKLER CONTROL VALVE
 - t BURIED TELEPHONE LINE tr BURIED ELECTRIC LINE inv OVERHEAD ELECTRIC LINE rcp BURIED TELEPHONE LINE pvc BURIED TELEPHONE LINE CDD BURIED TELEPHONE LINE

e BURIED ELECTRIC LINE

ohe OVERHEAD ELECTRIC LINE

S SANITARY MANHOLE

TELEPHONE MANHOLE

TELEPHONE MARKER SIGN

-- SIGN

₹%} TREE

SHEET KEYNOTES

- SANITARY SEWER KEYNOTES
- A. 8" PVC SDR-35 SANITARY SEWER MAIN (SEE SHEETS C410-C413 FOR SANITARY SEWER PLAN AND PROFILES)
- B. 6" PVC SDR-26 SANITARY LATERAL @ 1.04% MIN. SLOPE
- C. SANITARY SEWER CLEANOUT @ 100' MAX. SPACING D. CONNECT TO PROPOSED SANITARY SEWER WITH A 6"x8" WYE
- E. GREASE TRAP (REFER TO MEP FOR SIZE)
- F. SANITARY DOGHOUSE MANHOLE
- G. 8" PVC SDR-26 SANITARY SEWER MAIN (SEE SHEET C410 FOR SANITARY SEWER PLAN & PROFILE)
- A. 4" DUAL WALL HDPE PAVEMENT UNDERDRAIN @ 0.25% MIN. SLOPE
- B. 8" HDPE @ 1.0% MIN. SLOPE
- C. CLEANOUT
- D. 12" HDPE @ 1.0% MIN. SLOPE
- E. 6" HDPE @ 1.0% MIN. SLOPE

STORM SEWER KEYNOTES

- F. 10" HDPE @ 1.0% MIN. SLOPE
- WATER KEYNOTES
- A. 8" C900 DR14 PVC WATER LINE
- B. 6" C900 DR14 PVC FIRE PROTECTION LINE
- C. 6" C900 DR14 PVC DOMESTIC SERVICE
- D. 8" GATE VALVE
- E. 90° BEND WITH THRUST BLOCK
- F. 8" x 8" TEE WITH THRUST BLOCK
- G. FREE STANDING FIRE DEPARTMENT CONNECTION
- H. WATER VAULT WITH POST INDICATOR VALVE
- I. FIRE HYDRANT ASSEMBLY
- J. DOMESTIC WATER METER
- K. 6" ISOLATION VALVE
- L. 12" DUCTILE IRON CL350 WATER MAIN
- M. 8" x 6" REDUCER N. 8" 45° BEND
- O. 12" x 6" TEE WITH THRUST BLOCK
- P. 12" GATE VALVE
- Q. 12" x 8" TEE WITH THRUST BLOCK
- R. IRRIGATION METER
- S. TEE WITH THRUST BLOCK

AS NECESSARY.

- T. GATE VALVE MISC. KEYNOTES
- A. GAS LINE
- B. GAS METER C. CONNECT TO GAS MAIN PER UTILITY COMPANY STANDARDS
- D. UNDERGROUND ELECTRIC SERVICE
- E. ADJUST EXISTING UTILITY STRUCTURE TO PROPOSED FINISHED GRADE
- F. (2) 4" PVC CONDUITS (BELOW PAVEMENT AND EXTENDING 5' MINIMUM BEYOND CURB OR SIDEWALK)
- G. (4) 4" PVC CONDUITS (BELOW PAVEMENT AND EXTENDING 5' MINIMUM BEYOND CURB OR SIDEWALK)
- H. (6) 4" PVC CONDUITS (BELOW PAVEMENT AND EXTENDING 5' MINIMUM BEYOND CURB OR SIDEWALK)

VERTICAL SEPARATION REQUIRED BETWEEN WATER, STORM AND

- V CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF EXISTING UTILITIES TO ENSURE CONFLICTS DO NOT EXISTING WITH CONTRACTOR TO ENSURE VERTICAL CONFLICTS DO NOT EXIST. 18"
- CONTRACTOR TO CAP END AND MARK UTILITY STUB WITH 2"X4" LUMBER (PAINTED); EXTEND UTILITY STUB MINIMUM 5' BEYOND

UTILITY LEGEND

SANITARY CROSSINGS.

SIDEWALK OR CURB

OTILITI ELO	
——— w——	WATER LINE
FP	FIRE PROTECTION LINE
RD	ROOF DRAIN
G	GAS LINE
ss	SANITARY SEWER
	STORM SEWER
——ETC——	ELEC / TELECOMMUNICATIONS LI

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

INDY NE LODGING **ASSOCIATES, LLC**

5701 PROGRESS ROAD INDIANAPOLIS, IN, 46241



7260 Shadeland Station | Indianapolis, Indiana 46256 TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN

CERTIFIED BY: BRADLEY N. SCHRAGE

	ISSUANCE INDEX
	DATE:
	11/30/2015
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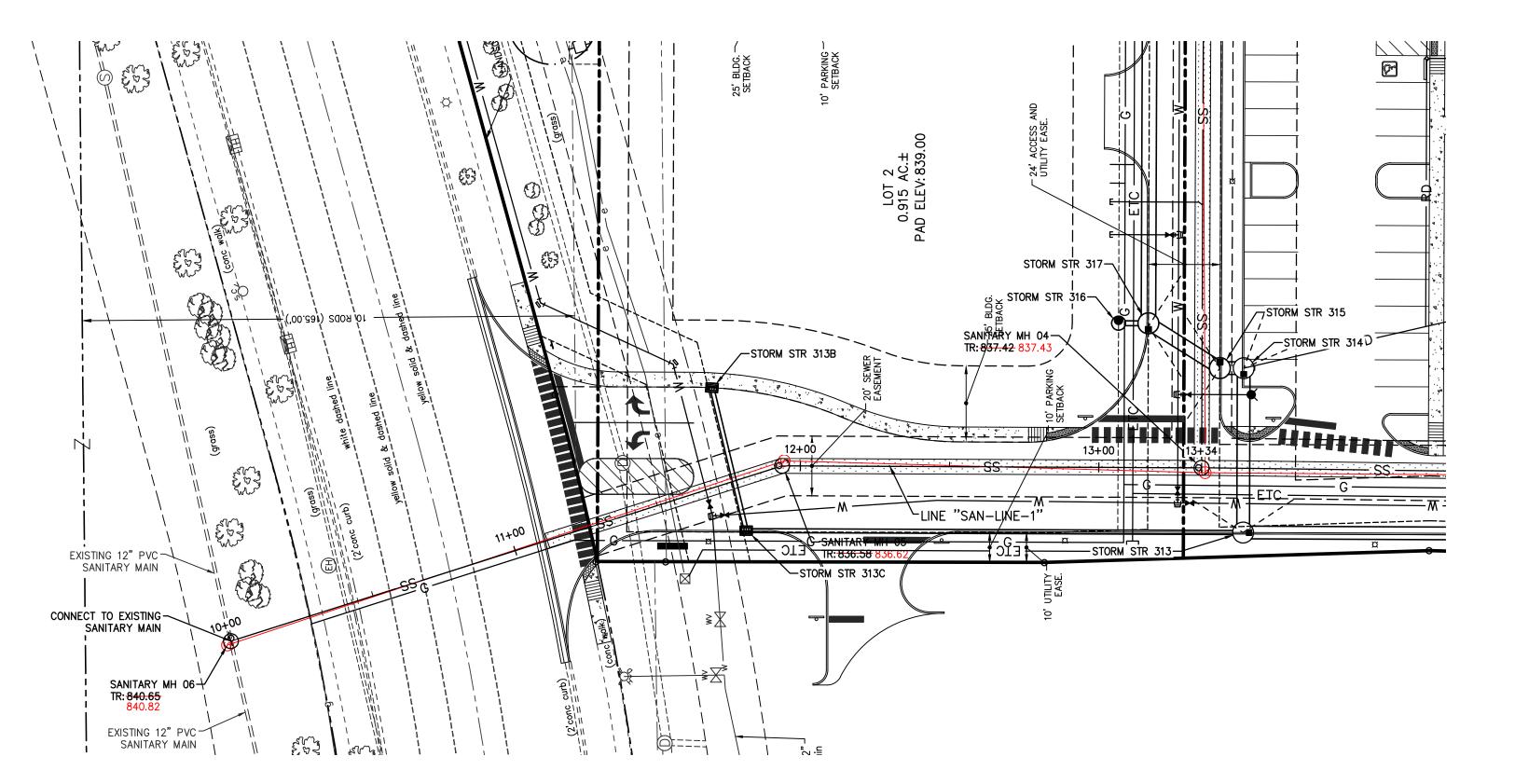
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NO.	DESCRIPTION	DATE		

Project Number 2015.01923

ENLARGED UTILITY PLAN

2016.01295.AB.C400-C401.UP.dwg

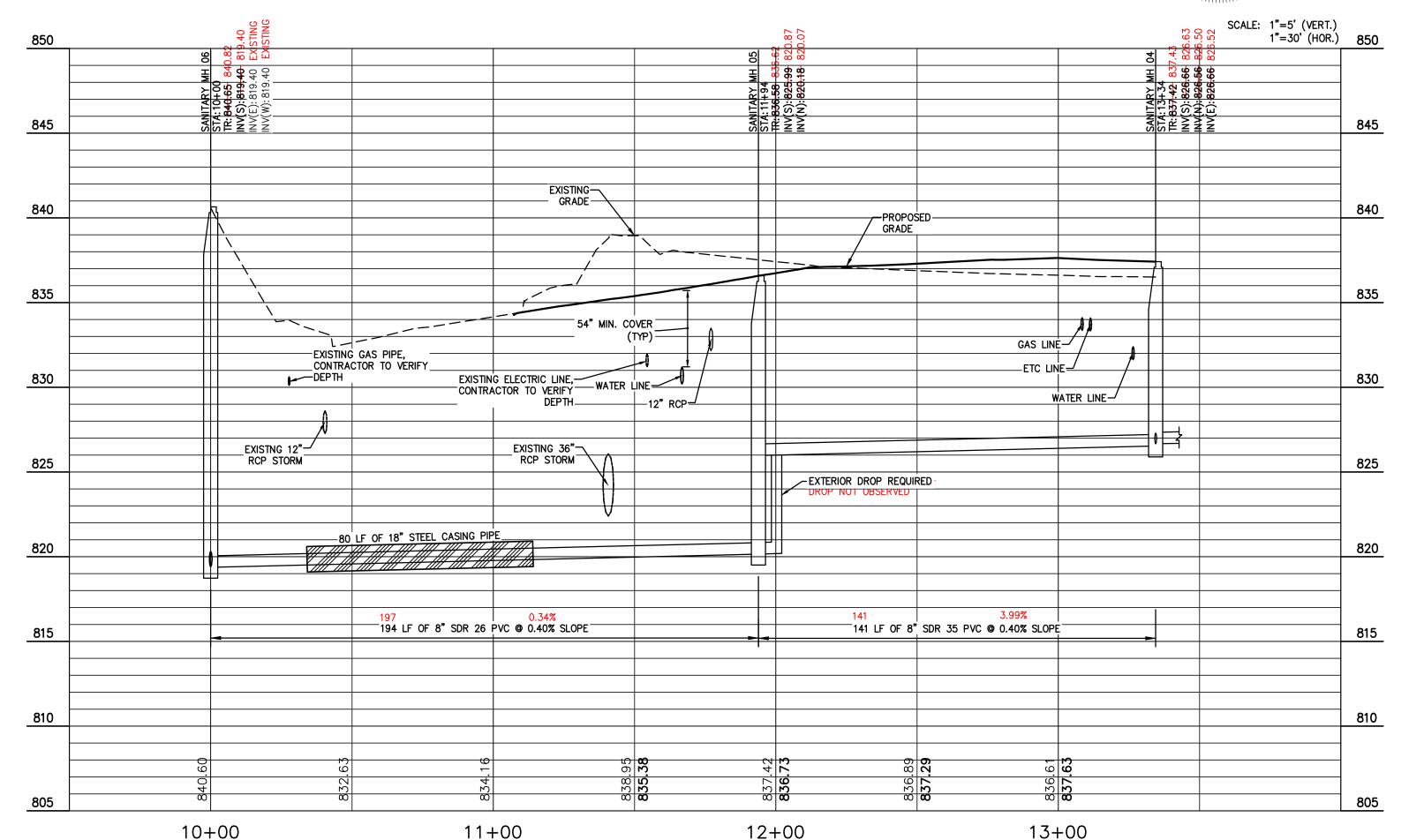
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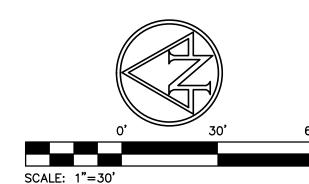


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UTILITY LEGEND

ELECTRIC LINE WATER LINE FIRE PROTECTION LINE ROOF DRAIN GAS LINE SANITARY SEWER STORM SEWER TELECOMMUNICATIONS LINE —— тс ——

INDY NE LODGING **ASSOCIATES, LLC**

5701 PROGRESS ROAD INDIANAPOLIS, IN, 46241

EXISTING LEGEND

BEEHIVE INLET S SANITARY MANHOLE 😂 BUSH TELEPHONE MANHOLE CURB INLET TELEPHONE MARKER SIGN D DRAINAGE MANHOLE ED ELECTRIC HANDHOLE र्र्हेंद्रे TREE E ELECTRIC METER BOX 直 ELECTRIC CROSS BOX e BURIED ELECTRIC LINE ohe OVERHEAD ELECTRIC LINE ─ GUY WIRE t BURIED TELEPHONE LINE □ LIGHT POLE tr BURIED ELECTRIC LINE • POST ☐ POWER POLE inv OVERHEAD ELECTRIC LINE

SPRINKLER CONTROL VALVE CPP BURIED TELEPHONE LINE CPP BURIED TELEPHONE LINE

rcp BURIED TELEPHONE LINE

BENCHMARK DATA

☑ RIGHT OF WAY MONUMENT

BENCHMARK INFORMATION (1929 datum)

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GRANULAR BACKFILL REQUIRED

EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

STRUCTUREPOINT

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OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN



This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an

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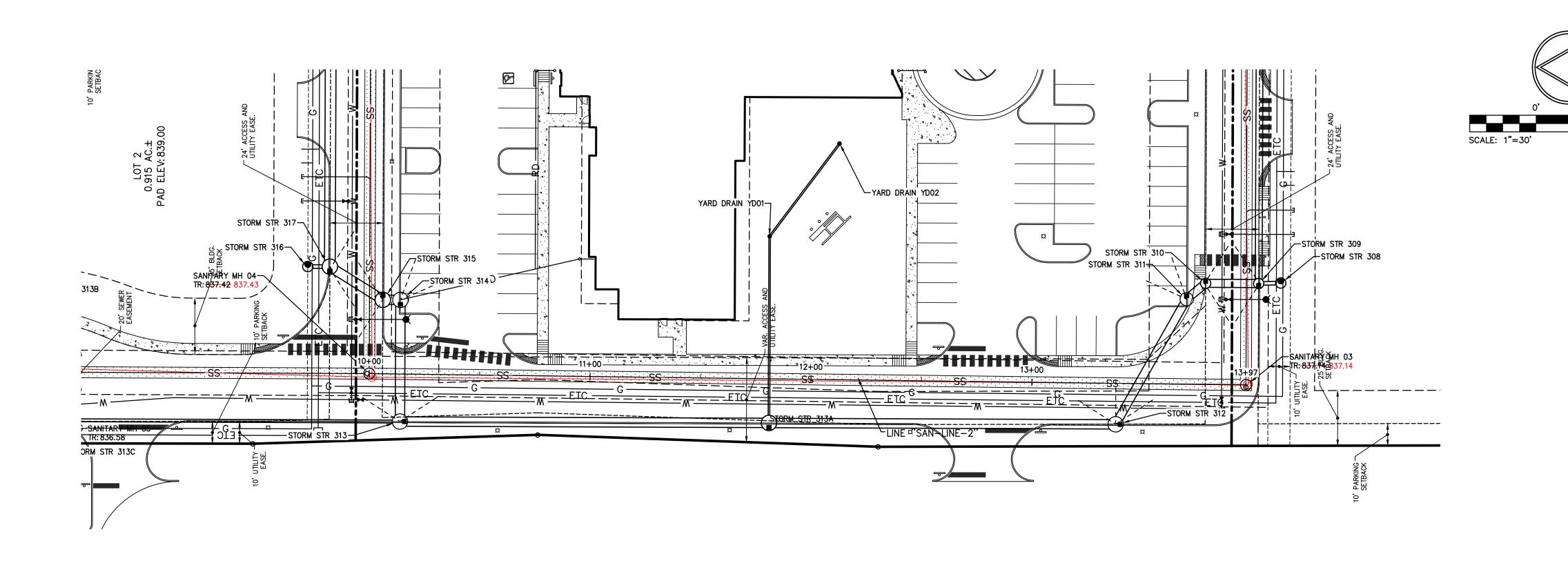
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SANITARY SEWER PLAN & PROFILE

C410



UTILITY LEGEND ELECTRIC LINE WATER LINE FIRE PROTECTION LINE ROOF DRAIN GAS LINE SANITARY SEWER STORM SEWER

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TELECOMMUNICATIONS LINE

─ GUY WIRE LIGHT POLE • POST ☐ POWER POLE ☑ RIGHT OF WAY MONUMENT

ohe OVERHEAD ELECTRIC LINE t BURIED TELEPHONE LINE tr BURIED ELECTRIC LINE inv OVERHEAD ELECTRIC LINE rcp BURIED TELEPHONE LINE SPRINKLER CONTROL VALVE CPP BURIED TELEPHONE LINE



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OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN



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CERTIFIED BY: BRADLEY N. SCHRAGE

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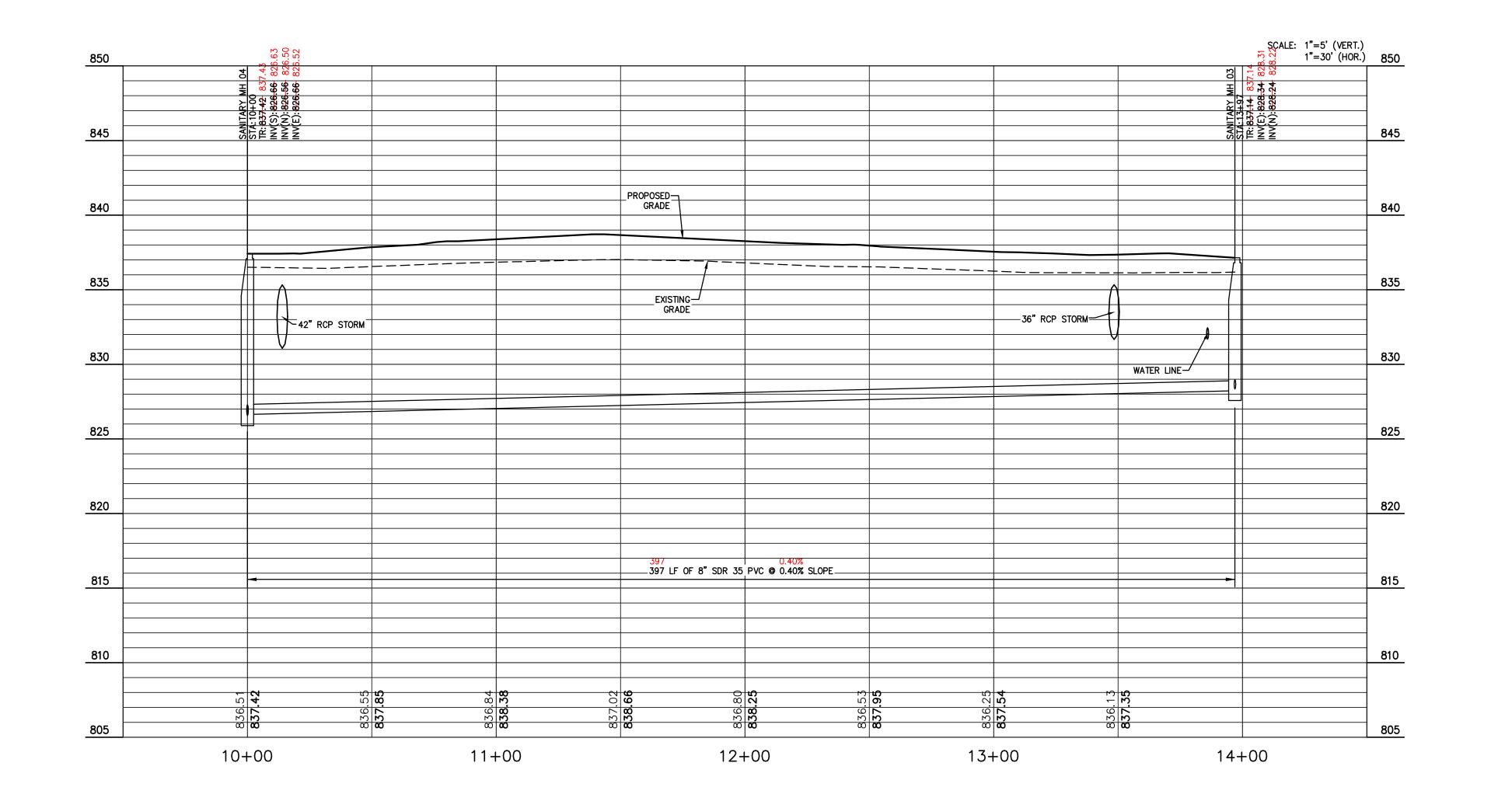
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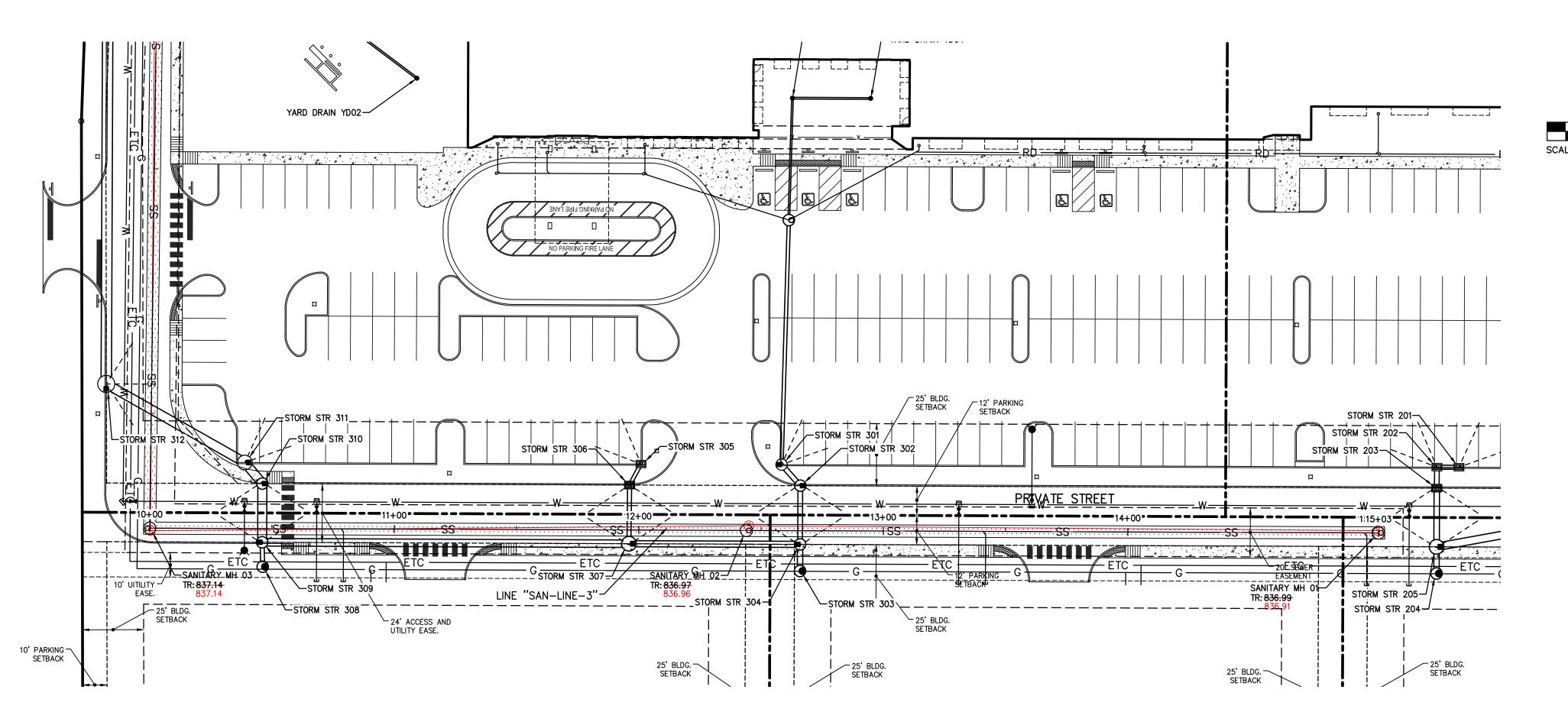
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SANITARY SEWER PLAN & PROFILE

C411





<u>____</u>___

└─PROPOSED

18" MIN. SEPARATION -

13+00

WATER LINE-

259 LF OF 8" SDR 35 PVC @ 0.40% SLOPE

14+00

GRADE

V ___18" RCP STORM

EXISTING

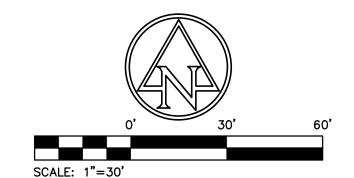
GRADE _

244 LF OF 8" SDR 35 PVC @ 0.40% SLOPE

11+00

—15" RCP STORM-

12+00



UTILITY LEGEND

—— Е ———	ELECTRIC LINE
——— W ———	WATER LINE
——FP——	FIRE PROTECTION LINE
RD	ROOF DRAIN
—— G ———	GAS LINE
SS	SANITARY SEWER
$\overline{}$	STORM SEWER

INDY NE LODGING **ASSOCIATES, LLC**

5701 PROGRESS ROAD INDIANAPOLIS, IN, 46241

EXISTING LEGEND

	AIOTINO EEGE	110	
	BEEHIVE INLET		SIGN
(C)	BUSH	S	SANITARY MANHOLE
	CURB INLET	\bigcirc	TELEPHONE MANHOLE
(D)	DRAINAGE MANHOLE		TELEPHONE MARKER SIGN
€	ELECTRIC HANDHOLE	\boxtimes	TRANSFORMER
E	ELECTRIC METER BOX	E	TREE
E	ELECTRIC CROSS BOX	e	BURIED ELECTRIC LINE
⊢	GUY WIRE	ohe	OVERHEAD ELECTRIC LINE
\Rightarrow	LIGHT POLE	t	BURIED TELEPHONE LINE
•	POST	tr	BURIED ELECTRIC LINE
占	POWER POLE	inv	OVERHEAD ELECTRIC LINE
П	RIGHT OF WAY MONUMENT	rcp	BURIED TELEPHONE LINE
95/r	SPRINKLER CONTROL VALVE	pvc	BURIED TELEPHONE LINE
O	SI MINICELLY CONTINUE VALVE	cpp	BURIED TELEPHONE LINE

TELECOMMUNICATIONS LINE

BENCHMARK DATA

BENCHMARK INFORMATION (1929 datum)

HAM G-36
AN ISHC BRONZE PLATE SET IN THE NORTH END OF THE EAST CURB OF THE STATE ROAD 238 BRIDGE OVER I-69. BRIDGE HAS BEEN REPLACED; MONUMENT DESTROYED.

ELEV = 860.34

CUT "X" FOUND NNW BONNET BOLT FIRE HYDRANT AT 30' WEST OF FAMOUS DAVE'S ENTRANCE; SOUTH SIDE TEGLER DRIVE.

TBM #76
CUT SQUARE FOUND ON THE NORTH TIP ISLAND MEDIAN AT THE CENTERLINE OF BERGEN BLVD IN FRONT OF INTAMETCO BUILDING, 1400'±
NORTH OF CAMPUS PARKWAY.
ELEV = 827.94

CUT "X" ON NORTH BOLT FIRE HYDRANT LOCATED ±30' EAST OF @ BERGEN BLVD AND ±100' SOUTH OF TEGLER DRIVE.

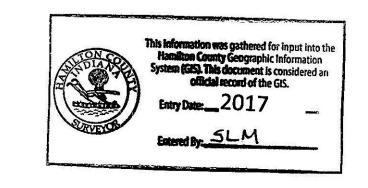
GRANULAR BACKFILL REQUIRED

STRUCTUREPOINT

7260 Shadeland Station | Indianapolis, Indiana 46256 TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN



SCALE: 1"=5' (VERT.) 1"=30' (HOR.) 850

15+00

SANITARY SEWER AS-BUILT STATEMENT

As—Built information for sanitary sewer rims are based upon above ground evidence of the existing sanitary sewer system. The strike through data shown on the Sanitary Sewers are the proposed elevations for all the structures to be placed. Said information has been replaced by the as-built information per elevations collected in the field on

CERTIFIED BY: BRADLEY N. SCHRAGE

ISSUANCE INDEX DATE: 11/30/2015

PROJECT PHASE: CONSTRUCTION DOCUMENTS

REVISION SCHEDULE NO. DESCRIPTION DATE

GENERAL NOTES:

CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.

29700000 🛂

STATE OF

- CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF VARIATION EXISTS.
- SEE SHEET COO2 GENERAL NOTES FOR MORE

CAUTION !!

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

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

- INFORMATION AND SHEETS C400-C401 FOR UTILITY

INDIANA UNDERGROUND —

Project Number 2015.01923

SANITARY SEWER

PLAN & PROFILE

C412

2016.01295.AB.C410-C413.SANPP.dwg

10+00

830

825

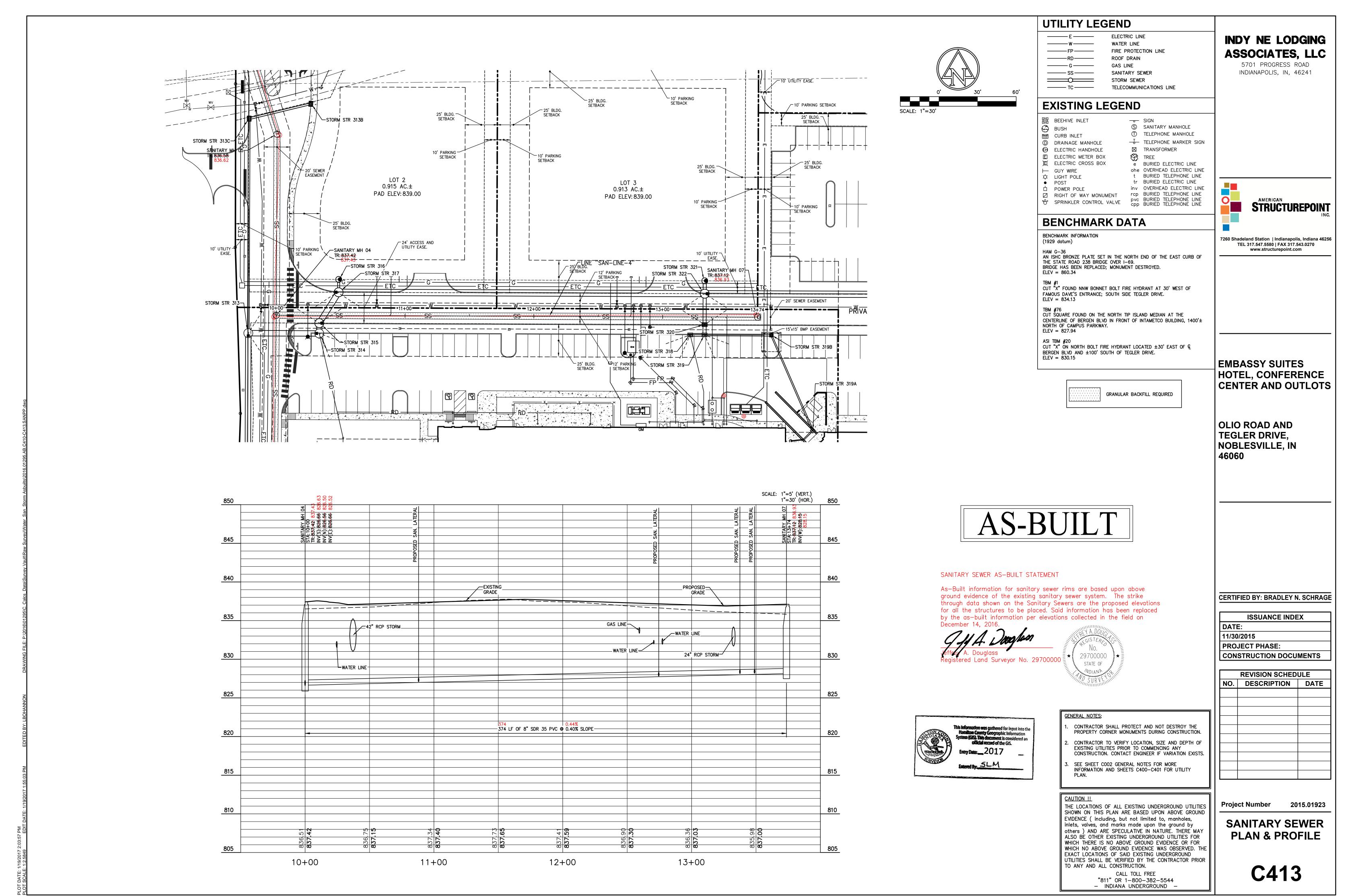
820

815

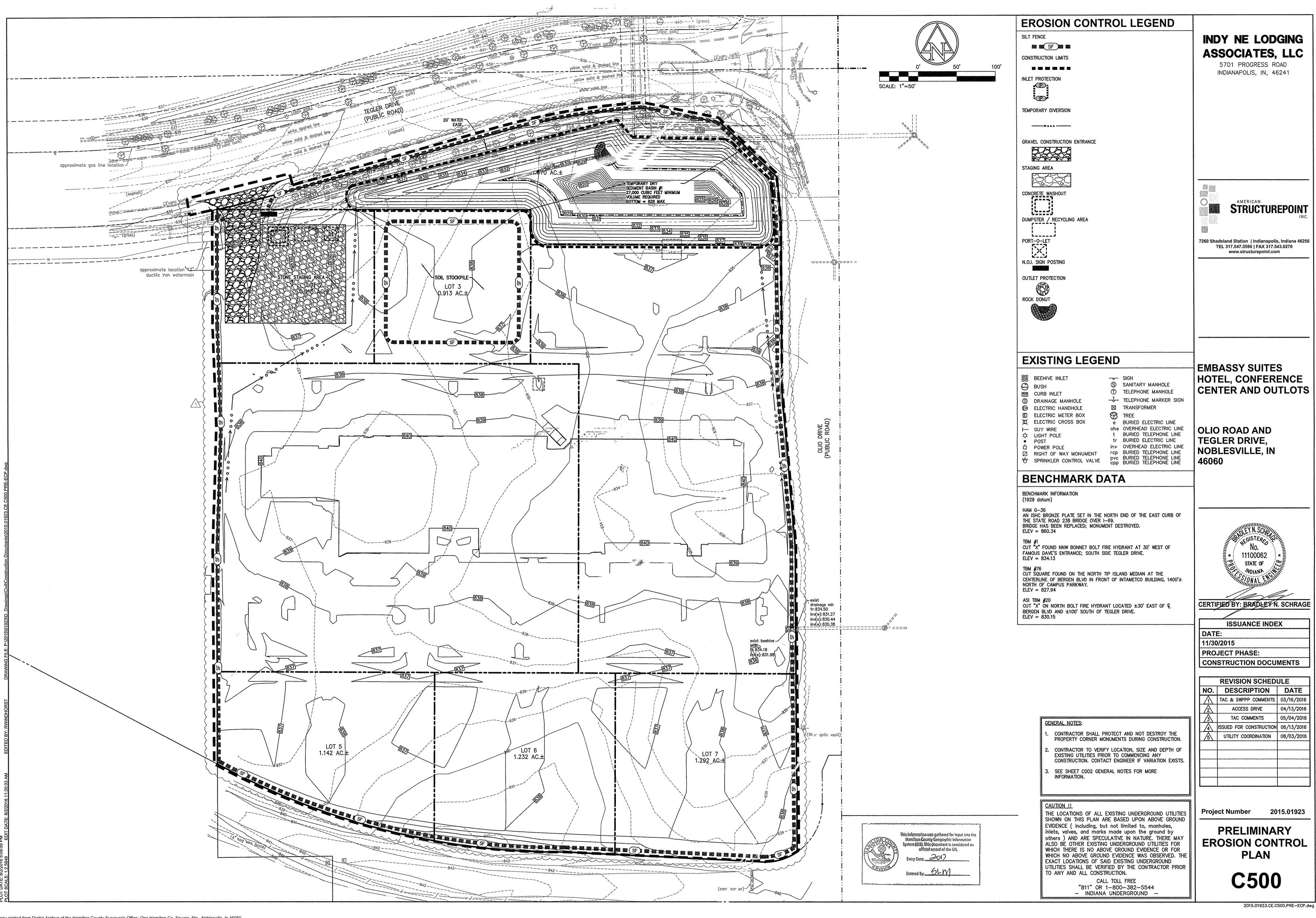
805

__36" RCP STORM___

-WATER LINE-

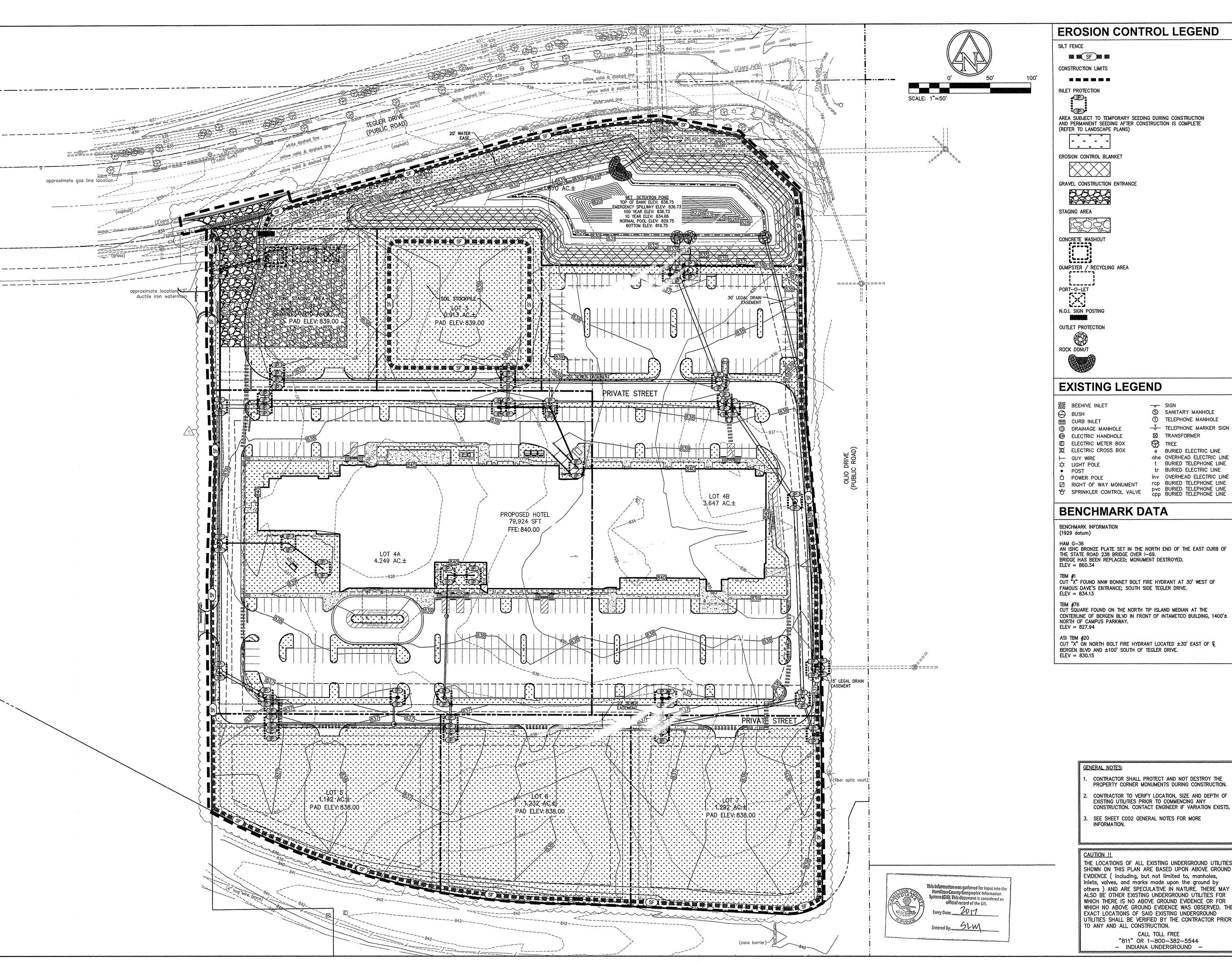


2016.01295.AB.C410-C413.SANPP.dwg



CERTIFIED BY: BRADLEY N. SCHRAGE

NO.	DESCRIPTION	DATE
Λ	TAC & SWPPP COMMENTS	03/16/2016
2	ACCESS DRIVE	04/13/2016
3	TAC COMMENTS	05/04/2016
4	ISSUED FOR CONSTRUCTION	06/13/2016
<u>\</u> 5	UTILITY COORDINATION	08/03/2016



EROSION CONTROL LEGEND

AREA SUBJECT TO TEMPORARY SEEDING DURING CONSTRUCTION AND PERMANENT SEEDING AFTER CONSTRUCTION IS COMPLETE (REFER TO LANDSCAPE PLANS)

-T- TELEPHONE MARKER SIGN ₹∰ TREE e BURIED ELECTRIC LINE ohe OVERHEAD ELECTRIC LINE t BURIED TELEPHONE LINE tr BURIED ELECTRIC LINE

inv OVERHEAD ELECTRIC LINE rcp BURIED TELEPHONE LINE pvc BURIED TELEPHONE LINE cpp BURIED TELEPHONE LINE

AN ISHC BRONZE PLATE SET IN THE NORTH END OF THE EAST CURB OF THE STATE ROAD 238 BRIDGE OVER I—69.
BRIDGE HAS BEEN REPLACED; MONUMENT DESTROYED.
ELEV = 860.34

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CUT SQUARE FOUND ON THE NORTH TIP ISLAND MEDIAN AT THE
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CUT "X" ON NORTH BOLT FIRE HYDRANT LOCATED ±30' EAST OF Q

OLIO ROAD AND

HOTEL, CONFERENCE

CENTER AND OUTLOTS

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5701 PROGRESS ROAD

INDIANAPOLIS, IN, 46241

7260 Shadeland Station | Indianapolis, Indiana 46256

TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

TEGLER DRIVE, NOBLESVILLE, IN

EMBASSY SUITES



CERTIFIED BY: BRADLEYN. SCHRAGE

ISSUANCE INDEX DATE:

11/30/2015 PROJECT PHASE: CONSTRUCTION DOCUMENTS

	REVISION SCHEDULE				
NO.	DESCRIPTION	DATE			
Λ	TAC & SWPPP COMMENTS	03/16/2016			
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·					

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> CALL TOLL FREE "811" OR 1-800-382-5544

Project Number 2015.01923

EROSION CONTROL PLAN

C501

The property is located the southwest corner of the intersection of Olio Road and Tegler Drive in Nobiesville, Indiana, at a latitude of 39°59'34" N and a longitude of 85°55'14" W.

OWNER'S INFORMATION

indy NE Lodging Associates, LLC 5701 Progress Road, indianapolis, IN 46241

Bharat Patel Representative: Telephone: (317) 247-5500

OPERATOR'S INFORMATION dy NE Lodging Associates, LLC 5701 Progress Road, Indianapolis, IN 46241

Representatives (317) 247-5500 Telephone:

All parties defined as owners or operators must submit a Notice of Intent (NOI) at least 48 hours prior to commencement of on-site construction activities. Submittal of late NOI's is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an operator is defined as any party meeting either of the following requirements:

- a) The party has operational control over construction plans and specifications, including the ability to make
- modifications to those plans and specifications. b) The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions.

A2 11" x 17" PLAT

Refer to the Site Plan.

A3 PROJECT NARRATIVE

This project consists of the development of approximately 15 acres in Noblesville, Indiana. The development includes the construction of a new, seven (7) story hotel, including infrastructure, not limited to the following activities: removal and stockpiling of topsoil and installation of sanitary sewers and laterals, water laterals, storm sewer, and other utilities. The site shall be paved and landscaped

The drainage plans for the site include a storm sewer designed for conveyance of the 10—year storm, a detention pond designed to detain through the 100—year storm and an outlet control structure restricting the release rates before discharging into an existing storm sewer located at the northeast corner of the property.

A4 VICINITY MAP

Refer to Title Sheet

A5 LEGAL DESCRIPTION OF THE PROJECT SITE

PART OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 18 NORTH, RANGE 5 EAST LOCATED IN FALL CREEK TOWNSHIP, HAMILTON COUNTY INDIANA MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BOLT AT THE SOUTHEAST CORNER OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 18 NORTH, RANGE 5 EAST: THENCE ON THE EAST LINE OF SAID SOUTHEAST QUARTER NORTH OO DEGREES 32 MINUTES 30 SECONDS WEST (ASSUMED BEARING) 1781.48 FEET: THENCE SOUTH 89 DEGREES 52 MINUTES 23 SECONDS WEST 16.50 FEET: THENCE SOUTH 22 DEGREES 53 MINUTES 54 SECONDS WEST 21.73 FEET: THENCE SOUTH OO DEGREES OF MINUTES 37 SECONDS WEST 43.44 FEET TO A TANGENT CURVE WITH A RADIUS 75.00: THENCE ON THE ARC OF SAID CURVE 73.08 FEET WITH A CHORD BEARING SOUTH 27 DEGREES 47 MINUTES 10 SECONDS WEST 70.22 FEET TO THE POINT OF BEGINNING: THENCE CONTINUING ON SAID ARC 44.27 FEET WITH A CHORD OF SOUTH 72 DEGREES 36 MINUTES 40 SECONDS WEST 43.64 FEET: THENCE NORTH 87 DEGREES 09 MINUTES 13 SECONDS WEST 258.75 FEET TO A CURVE WITH A RADIUS OF 914.93 FEET: THENCE ON THE ARC OF SAID CURVE 451.11 FEET WITH A CHORD BEARING NORTH 76 DEGREES 21 MINUTES 07 SECONDS WEST 446.56 FEET: THENCE NORTH 62 DEGREES 13 MINUTES 37 SECONDS WEST 18.75 FEET TO THE EAST LINE OF THE SECONDARY REPLAT OF SAXONY CORPORATE CAMPUS AS FILED IN PLAT CABINET 4, SLIDE 111 AND RECORDED AS INSTRUMENT No. 200600042635; THENCE ON SAID EAST LINE THE FOLLOWING FOUR COURSES; 1) NORTH OO DEGREES O7 MINUTES 31 SECONDS WEST 279.07 FEET; 2) THENCE NORTH 01 DEGREES 59 MINUTES 43 SECONDS EAST 154.27 FEET; 3) THENCE NORTH 01 DEGREES 45 MINUTES 59 SECONDS WEST 129.01 FEET: 4) THENCE NORTH OO DEGREES 06 MINUTES 58 SECONDS EAST 150.11 FEET TO THE SOUTH RIGHT OF WAY LINE OF TEGLER DRIVE PER INSTRUMENT No. 200300051352 BEING A NON-TANGENT CURVE WITH A RADIUS OF 1003.93 FEET; THENCE ON SAID SOUTH RIGHT OF WAY LINE THE FOLLOWING 3 COURSES: 1) THENCE ON THE ARC OF SAID CURVE 57.62 FEET WITH A CHORD BEARING NORTH 76 DEGREES 14 MINUTES 45 SECONDS EAST 57.62 FEET; 2) THENCE NORTH 74 DEGREES 36 MINUTES 05 SECONDS EAST 320,22 FEET TO A TANGENT CURVE WITH A RADIUS OF 905,93 FEET; 3) THENCE ON THE ARC OF SAID CURVE 193,84 FFET WITH A CHORD REARING NORTH 80 DEGREES 43 MINUTES 52 SECONDS FAST 193.47 FEET: THENCE THE REMAINING COURSES BEING ALONG THE WEST RIGHT OF WAY OF OLIO ROAD AS EVIDENCED IN INSTRUMENT No. 2012075714: THENCE SOUTH 78 DEGREES 48 MINUTES 38 SECONDS EAST 98.85 FEET; THENCE SOUTH 46 DEGREES 04 MINUTES 53 SECONDS EAST 101.16 FEET; THENCE SOUTH 05 DEGREES 11 MINUTES 28 SECONDS EAST 26.42 FEET: THENCE SOUTH 05 DEGREES 08 MINUTES 49 SECONDS EAST 30.40 FEET: THENCE SOUTH 00 DEGREES 07 MINUTES 37 SECONDS EAST 215.95 FEET; THENCE SOUTH 04 DEGREES 47 MINUTES 11 SECONDS EAST 200.66 FEET; THENCE SOUTH OO DEGREES 17 MINUTES 16 SECONDS EAST 239.63 FEET: THENCE SOUTH OO DEGREES 11 MINUTES 04 SECONDS EAST 154.63 FEET TO THE POINT BEGINNING, CONTAINING 15.060 ACRES, MORE OR LESS.

46 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS

The site will not be subdivided; therefore, there are no individual lots on the property. The proposed site improvements are shown on the included plans.

A7 HYDROLOGIC UNIT CODE (HUC)

051202021110040

AS STATE AND FEDERAL WATER QUALITY PERMITS

A Rule 5 IDEM Permit is required

A9 SPECIFIC POINT WHERE STORMWATER DISCHARGE WILL LEAVE THE SITE

Stormwater drainage from the site will be conveyed by a proposed storm sewer to a proposed detention pond located at the northeast corner of the property. The detention pond will discharge into an existing 48" storm sewer at the northeast corner of the property. The ultimate receiving waters for the detention pond are Mud Creek—Sand Creek and

A10 LOCATION AND NAME OF ALL WETLANDS, LAKES, AND WATERCOURSES ON AND ADJACENT TO THE SITE.

No wetlands, lakes or watercourses exist on or adjacent to the site.

A11 IDENTIFICATION OF ALL RECEIVING WATERS

Mud Creek-Sand Creek and E.E. Bennet Drain are the ultimate receiving waters for the project area.

A12 IDENTIFICATION OF ALL POTENTIAL DISCHARGES TO GROUND WATER

There are no locations on site where surface water may be discharged into ground water.

A13 100-YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGES

The lot is located in an unshaded Zone "X" (areas determined to be outside the 0.2 percent annual chance floodplain) as indicated on the Hamilton County, Indiana, Flood Insurance Rate Map 18057C0256G dated November 19, 2014.

A14 PRE-CONSTRUCTION AND POST-CONSTRUCTION ESTIMATE OF PEAK DISCHARGE

Pre-construction 10-year discharge: 14.70 cfs Post-construction 10-year discharge: 1.50 cfs

A15 ADJACENT LAND USE

West: Commercial

North: Agriculture East: Agriculture South: Interstate/Commercial

A16 LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS

Approximate boundaries of disturbed areas are as identified on the Erosion Control Plan.

A17 IDENTIFICATION OF EXISTING VEGETATIVE COVER

Site site is currently vacant and covered in native vegetation.

A18 SOILS MAP INCLUDING SOIL DESCRIPTION AND LIMITATIONS

The Natural Resources Conservation Service (NRCS) Web Soil Survey of Hamilton County, Indiana, indicates Brookston silty clay

loam (Br) and Crosby silt loam (CrA) soils are located on the site.

The suitability of the soils for commercial buildings is listed as very limited. The on—site soil will be treated as recommended by the geotechnical engineer if the conditions are unsuitable for the proposed construction. Remedial treatments may include, but are not limited to, removal of unsuitable soil and backfilling with engineered material, nstallation of a geofabric within or under the pavement system, or treatment of the subgrade with lime.

The suitability of the soils for pavement (local roads and streets) is listed as very limited. The on-site soil will be treated as recommended by the geotechnical engineer if the conditions are unsuitable for the proposed construction. Remedial treatments may include, but are not limited to, removal of unsuitable soil and backfilling with engineered material, installation of a geofabric within or under the payement system, or treatment of the subgrade with lime.

A19 LOCATIONS, SIZE, AND DIMENSIONS FOR PROPOSED STORMWATER SYSTEMS

Locations of stormwater systems: Refer to the Grading Plan or Storm Sewer Plan and Profiles Size of storm sewer: Refer to the Structure Data Table or Storm Sewer Plan and Profiles Details of storm inlets and manholes: Refer to Site Details

Refer to sheet 5 of the City of Noblesville Construction Standards for Storm Drain Casting Message Detail. A20 PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT

No off-site construction is anticipated with this project.

A21 LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL

No soil import or export is anticipated with this project. However, any excess soil shall be immediately stockpiled, surrounded with slit fence and seeded and/or removed from the construction site in accordance with all applicable laws.

A22 EXISTING SITE TOPOGRAPHY

Refer to the Existing Topography Plan

The following potential pollutant sources may be associated with construction activities on site:

- Exposed soils
- Sanitary waste from temporary toilet facilities

- Structural fill
- Water main pipe and appurtenances 5. Concrete drainage pipe
- Precast concrete manhole

82 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND-DISTURBING ACTIVITIES

- Conduct an erosion control and sediment control pre-construction meeting with the City of Noblesville MS4 prior to any earth moving activities.
- Utilize the gravel construction entrance for installation of the perimeter silt fence. Add stone if needed. Post the NOI
- install staging area, fueling station, material storage area and concrete truck washout. Strip the top soil and grade; stockpile topsoil at northwest corner of site, east of entry drive.
- Begin construction of new legal drain to provide offsite drainage during construction. 10. Install storm sewer and other utilities. Provide injet protection immediately upon completion of the injet and install
- riprap outlet protection prior to installing outlets. Final grade and stabilize slopes when inlets are functioning.
- 12. Prior to building construction install stone surface for paved areas
- 13. Building pads left dormant for more than 15 days, must be temporarily seeded. 14. Start building construction. Install staging area for building materials.
- 17. Install landscaping plant material and stabilize all disturbed areas. (18. Remove all erosion and sediment control practices when areas have a uniform grass cover.

Construction entrances will be in place prior to any site construction or demolition. Entrances are shown on the Erosian Control Plan, refer to the Erosion Control Details for details.

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS

Sheet flow areas will be protected by seed and mulch or hydroseeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 6:1 (horizontal to vertical). Silt Fencing will be utilized to prevent sedimentation from leaving the site. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details.

B5 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS

Proposed swales will be stabilized with erosion control blankets. Straw bales and slit fences will not be allowed as concentrated flow protection measures. Refer to the Erosion Control Plan for locations and the Erosion Control Details for

The contractor shall install catch—all inlet protection measures at each inlet in paved areas and silt fence inlet protection around inlets in grass areas during construction. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details. Straw bales <u>will not</u> be allowed as inlet protection measures.

B7 RUNOFF CONTROL MEASURES

being conveyed offsite.

BB STORMWATER OUTLET PROTECTION SPECIFICATIONS

and the Erosion Control Details for details.

Stormwater outlets will be protected by riprap aprons to prevent scour erosion. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details.

B9 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS Rip rap aprons at outlets will be utilized to prevent grade destabilization. Refer to the Erosion Control Plan for locations

BIO LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE

Stormwater quality will be provided by a detention pond located at the northeast corner of the site. Side slopes of the detention pond will be stabilized by erosion control blankets. Refer to the Erosion Control Plan for the detention pond location and Erosion Control Details for detention pond details.

B11 TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON

Surface stabilization is required on any bare or thinly vegetated area that is scheduled or likely to remain inactive for a period of 15 days or more. Refer to the Temporary Seeding Detail within Erosion Control Details for specifics on soil

Loosen lawn area to a minimum depth of 6 inches. Mix soil amendments and fertilizers with topsoil at rates specified. Organic soil amendments such as peat, compost or manure shall be applied at 2" depth evenly over soil and incorporated into the top 6" of topsoil. Provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 sq. ft. of lawn area and 2 percent potassium. At least 50 percent of nitrogen to be organic

- percent potassium by weight. Phosphorus free fertilizer should be used unless soil test confirms the need. potassium made up of a composition by weight of 5 percent. Phosphorus free fertilizer should be used unless soil test
- D. Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Limit fine grading to areas that can be planted within immediate future. Remove trash, debris, stones larger than 1 inch diameter, and other objects that
- Install erosion control blankets as indicated on the plan. Protect seeded greas against erosion by spreading clean, seed-free straw mulch after completion of seeding operations. Spread uniformly to form a continuous blanket not less than 1-1/2 inches loose measurements over seeded areas.
- Water newly planted lawn areas and keep moist until new grass is established. Immediately repair any lawn areas disturbed by construction activities including tree and shrub installation J. J. Refer to the Erosion Control Details, within the Seasonal Soil Protection Chart for timing of temporary and permanent
- seeding and grass seed specifications

813 MATERIAL HANDLING AND SPILL PREVENTION PLAN

No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable materials incidental to the construction activity, must be collected in containers or closed dumpsters. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper

Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste

A foreman or supervisor should be designated in writing to oversee, enforce and instruct construction workers on proper hazardous waste procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the facility.

Dust Control/Off-Site Vehicle Tracking

construction, the site should be stabilized to reduce dust.

Construction traffic should enter and exit the site at a Construction Entrance with a rock pad or equivalent device. The purpose of the rock pad is to minimize the amount of soil and mud that is tracked onto existing streets. If sediment escapes the construction site, off—site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts.

Contractors and subcontractors must comply with all state and local sanitary sewer, portable tallet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. The sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities are the responsibility of the contractors and subcontractors. The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site

<u>Water Source</u>
Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.

Equipment Fueling and Storage Areas

Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed area). Leaking equipment and maintenance fluids will be collected and not allowed to discharge onto soil where they may be washed away during a rain event.

Equipment wash down (except for wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited

<u>Hazardous Material Storage</u> Chemicals, paints, solvents, fertilizers, and other toxic or hazardous materials should be stored in their original containers (if original container is not resealable, store the products in clearly labeled, waterproof containers). Except during application, the containers should be kept in trucks or in bermed areas within covered storage facilities. Runoff containin such materials shall be collected, removed from the site, and disposed of in accordance with the federal, state, and local

As may be required by federal, state or local regulations, the Contractor should have a Hazardous Materials Management Plan and/or Hazardous Materials Spill and Prevention Program in place. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous materials storage and handling procedures. The location of any hazardous material storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the storage areas.

Material Handling and Spill Prevention Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the National Response Center (1-800-424-8802) to properly report the spill. In addition, the operator shall submit a written description of the release (including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spills) to the local governing authority. The SWPPP must be revised within 14 calendar days after the release to reflect the release, stating the information above along with modifications to minimize the possibility of future

All concrete trucks waste material shall be completely contained and disposed in accordance with all local, state, and federal regulations. A pit or container is required when cleaning concrete chutes.

occurrences. Each contractor and subcontractor is responsible for complying with these reporting requirements.

Ainor — Small spills that typically involve oil, gasoline, paint, hydraulic fluid, etc., can be controlled by the first responder at the discovery of the splil. Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.

Semi-Significant Spills - Approximately ten gallons or less of pollutant with no contamination of ground or surface waters. Minor spills can be generally controlled by the first responder with help from other site personnel. This response may require other operations to stop to make sure the spill is quickly and safely addressed. At the discovery of the spill:

Use absorbent material to clean—up spill material and any subsequently contaminated soil and dispose of

Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.

Use absorbent material to clean—up spills and dispose of properly. Spills on impervious surfaces should be

- disposed of as soon as possible to prevent migration deeper into the soil and groundwater. Dispose of contaminated soils or absorbents properly.
- Contact 911 if the spill could be a safety issue. Contact supervisors and designated site inspectors immediately Contaminated solids are to be removed to an approved landfill

Major or Hazardous Spills — More than ten gallons, there is the potential for death, injury or illness to humans or animals, or has the potential for surface or groundwater pollution.

- · Control or contain the spill without risking bodily harm. Temporarily plug storm drains if possible to prevent migration of the spill into the stormwater system. Immediately contact the local Fire Department at 911 to report any hazardous material spill. . Contact supervisors and designated site inspectors immediately. Other county or municipal officials (City of
- Noblesville Engineering Department) responsible for storm water facilities should be contacted as well. The contractor is responsible for having these contact numbers available at the job site. A written report should be submitted to the owner as soon as possible. As soon as possible but within 2 hours of discovery, contact the Department of Environmental Management Office of Emergency Response 1-888-233-7745, Noblesville Fire & Police Department, and City of Noblesville MS4 317-776-6330. The following information should be noted for future reports to the agency:
- Name, address and phone number of person making the spill report The location of the spill
- identification of the spilled substance Approximate quantity of the substance that has been spilled or may be further spilled
- The duration and source of the spill Name and location of the damaged waters
- Name of spill response organization What measures were taken in the spill response Other information that may be significant

inspections shall be conducted at least once every month

Additional regulations or requirements may be present. A spill response professional should be consulted to make sure all appropriate and required steps have been taken. Contaminated solids should only be removed from the site after approval is given by the appropriate agency.

B14 MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE

All impacted areas, as well as all erosion and sediment control devices, will be inspected every seven (7) calendar days and within 24 hours after a rainfall of 0.5 Inch or greater. Where sites have been final or temporarily stabilized or on

Inspections shall be conducted and a written report prepared, by a designated and qualified person familiar with the inspection reports shall be completed including scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, observations relating to the implementation of the SWPPP, and any actions taken as a result of incidents of noncompliance noted during the inspection. The inspection report should state whether

the site was in compliance or identify any incidents of noncompliance. The contractor shall keep a copy of the inspection

sites where runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists), such

reports on site and permanently for a period of two years following construction. The on—site reports may be requested by inspections conducted by the local Soil and Water Conservation District.

subcontractor shall be responsible for maintaining the Construction Entrance and other controls as described in this Material Storage Inspections Inspectors must evaluate areas used for storage of materials that are exposed to precipitation. The purpose is to ensure that materials are protected and/or impounded so that pollutants cannot discharge from storage areas. Off—site material

Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking. Each contractor and

erosion control plans and the site inspection reports. <u>Soil Stabilization inspections</u> Seeded areas will be inspected to confirm that a healthy stand of vegetation is maintained. The site has achieved final stabilization once all areas are covered with pavement or have a stand of vegetation with at least 70% of the background vegetation density. The density of 70% or greater must be maintained to be considered as stabilized. The

storage areas used solely by the subject project are considered to be part of the project and must be included in the

perator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.

- All controls should be inspected at least once every seven (7) calendar days and following any storm event of 0.5 inch or greater. The following is a list of inspection/maintenance practices that will be used for specific controls: Geotextiles/Erosion Control Mats: Missing or loose matting must be replaced or re-anchored. Inlet Protection: If silt fence inlet protection is to be used, sediment should be removed when it reaches
- approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%. Diversion Swales: Clean debris or other obstructions as needed. Damage from storms or normal construction activities (i.e., tire ruts) shall be repaired immediately.
- Silt Fence: Removal of built-up sediment will occur when the sediment reaches one-third the height of the fence. Stabilized Construction Entrance: Periodic re—grading and top dressing with additional stone.

 Vegetation: Protect newly seeded areas from excessive runoff and traffic until vegetation is established. Establish Good Housekeeping: Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented

from becoming a pollutant source for stormwater discharges through screening of outfalls and daily pickup of litter n the event that sediment escapes the construction site, off—site accumulations of sediment must be removed at a requency sufficient to minimize adverse impacts. An example of this may be the situation where sediment has washed into the street and could be carried into the storm sewers by the next rainfall and/or pose a safety hazard to users of public streets. Modifications/Revisions to SWPPP.

Based on inspection results, any necessary modification to this SWPPP shall be implemented within seven calendar days of the inspection. A modification is necessary if a control measure or operational procedure does not provide adequate pollutant control. All revisions shall be recorded on a Record of Revisions within seven calendar days of the inspection

It is the responsibility of the operator to maintain effective pollutant discharge controls. Physical site conditions or contractor/subcontractor practices could make it necessary to install more controls than were originally planned. For example, localized concentrations of surface runoff or unusually steep areas could require additional silt barrier or other structural controls. Assessing the need for and installing additional controls will be a continuing contractor/subcontractor responsibility until final stabilization is achieved. Contractors and subcontractors implementing this SWPPP must remain alert to the need to periodically refine and update this SWPPP in order to accomplish the intended goals.

Notice of Termination Compliance of the site with the General Construction Permit remains the responsibility of all operators that have submitted an NOI until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the General Construction Permit terminates at midnight of the day the NOT is signed.

- All permittees must submit an NOT within thirty (30) days after one or more of the following conditions have been met:
- Another operator/permittee has assumed control over all areas of the site that have not been finally stabilized 3. In residential construction operations, temporary stabilization has been completed and the residence has been

1. Final stabilization has been achieved on all portions of the site for which the permittee was responsible

Since the entire site is under a single ownership, there are not any individual building lots.

transferred to the homeowner.

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE

The proposed land use is a hotel. The pollutants and sources of each pollutant normally expected from this type of land use are listed below:

Pollutant Source: Passenger vehicles, delivery vehicles. Type of Pollutant: Oil, gasoline, diesel fuel, any hydrocarbon associated with vehicular fuels and lubricants, grease, antifreeze, windshield cleaner solution, brake fluid, brake dust, rubber, glass, metal and plastic fragments, grit, road

Pollutant Source: Building
Type of Pollutant: Cleaning solutions or solvents, leaks from HVAC equipment, grit from roof drainage, aggregate or

rubber fragments from roofing system

Pollutant Source: Trash dumpster Type of Pollutant: Cleaning solutions or solvents, litter (paper, plastic, general refuse associated with distribution operations), uneaten food products, bacteria.

Pollutant Source: Parking lot Type of Pollutant: Any pollutant associated with vehicular sources, grit from asphalt wearing surface, bituminous compounds from periodic maintenance (sealing, resurfacing and patching), pavement de-icing materials, paint fragments from parking stall stripes, concrete fragments, wind-blown litter from off-site sources, elevated water temperatures from contact with impervious surfaces.

Pollutant Source: Lawn and landscape areas Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings)

C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION

vary with each manufacturer.

The stormwater detention pond will remain in place as a permanent feature after construction is completed. The purpose of the this measures is to restrict stormwater discharges and provide a sediment removal function. C3 DESCRIPTION OF PROPOSED POST—CONSTRUCTION STORMWATER QUALITY MEASURES

Mechanical BMP (Aqua—swirl) A BMP structure will be installed at the downstream end of the storm sewer system, prior to the detention pond. The primary purpose of the BMP is to remove sediment, oils and floatable debris from the stormwater prior to discharging

Good Housekeeping measures such as regular street sweeping, installation of trash receptacles, and reduction in fertilizer

overspray can be incorporated by the owner and/or occupant. 4 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE The following Items are stormwater quality measures that will be installed during construction. These items will remain in

place after construction is completed and are considered to serve an incidental function as post-construction Mechanical BMP (Aqua-Swirl)
The Aqua-Swirl will be located at the northeast corner of the site. Location of the Aqua-Swirl may be found on the

grading plan sheet and details may be found on the site details sheets. 5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER QUALITY MEASURES Maintenance requirements for the stormwater quality measures which will remain in place after construction is complete,

are described below. Refer to the BMP Operations and Maintenance Manual for more detailed maintenance requirements

<u>Mechanical BMP</u>
Frequent inspection and cleanout is critical for proper operation. Recommended inspection and maintenance schedules

INDY NE LODGING ASSOCIATES, LLC

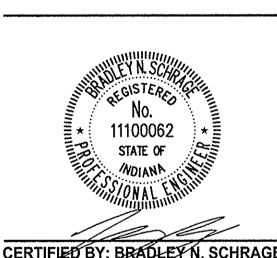
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EMBASSY SUITES HOTEL. CONFERENCE CENTER AND OUTLOTS

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ISSUANCE INDEX

CONSTRUCTION DOCUMENTS

DATE:

11/30/2015

PROJECT PHASE:

REVISION SCHEDULE NO. DESCRIPTION DATE TAC & SWPPP COMMENTS | 03/16/2016 04/13/2016 ACCESS DRIVE 05/04/2016 TAC COMMENTS ISSUED FOR CONSTRUCTION 06/13/2016 UTILITY COORDINATION 08/03/2016

Project Number 2015.01923

This information was gathered for input into the

Hamilton County Geographic Information
System (GIS). This document is considered an

Official record of the GIS

Entry Date: 2017

Entered By: 5LM

STORMWATER **POLLUTION PREVENTION PLAN**

2015.01923.CE.C510.SWPPP.dwg

Name: Address:

A23 PROPOSED FINAL SITE TOPOGRAPHY

Refer to the Grading Plan

B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

- Material storage areas (more specifically described below) Construction waste material Fuel storage areas and fueling stations
- Leaking vehicles and equipment
- Litter Windblown dust 9. Soil tracking off site from construction equipment
- The following construction materials may be staged or stored on site at various points during development of the site:

Road base Plastic drainage pipe

7. Rock rip-rap

- Install construction entrance.
- at the entrance. Add protection measures to existing inlets.
- Complete the cut and fills on the site. Final grade and stabilize the pond slopes with erosion control blankets.
- 15. Complete utility installation, curbs, paving and building construction. 16. Seed the perimeter of the site.

B3 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS

B6 STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS

Silt fence will be installed around the perimeter of the site where runoff may leave the site to prevent sediment from

- B12 PERMANENT SURFACE STABILIZATION SPECIFICATIONS
- form. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days. ^Fertilizer for lawns: ^ provide a fast release fertilizer with a composition of 1 lb per 1,000 sq. ft. of actual nitrogen, and 2 C. Slow-release fertilizer for trees and shrubs: granular fertilizer consisting of 50 percent water-insoluble nitrogen, and
- may interfere with planting or maintenance operations. Sow seed using a spreader or seeding machine. Do not seed when wind velocity exceeds 5 miles per hour. Distribute seed evenly over entire area by sowing equal quantity in 2 directions at right angles to each other. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with a fine spray.

materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer. Use containment berms in fueling and maintenance areas and where potential for spills is high

During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS

SPECIFICATIONS

NOTE: ALTERNATIVE SUPPORT SYSTEMS MAY BE SUBSTITUTED FOR HARDWOOD POSTS AND CROSS BRACES

CONTRIBUTING DRAINAGE AREA ONE ACRE MAXIMUM.

EFFECTIVE LIFE SIX MONTHS (MAXIMUM).

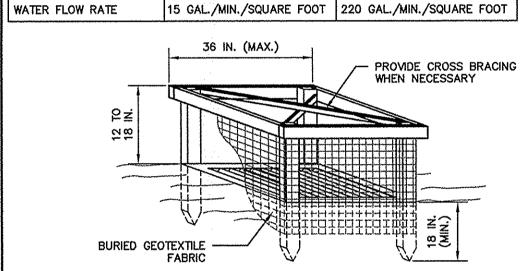
RUNOFF FROM A TWO-YEAR FREQUENCY, 24-HOUR STORM EVENT ENTERING A STORM DRAIN WITHOUT BYPASS FLOW.

HEIGHT - 12 TO 18 INCHES, MEASURED FROM THE TOP OF STORM DRAIN INLET.
POST SPACING - 36-INCH MAXIMUM SPACING BETWEEN POSTS. FRAME SUPPORT - BRACING TO STRENGTHEN INTEGRITY OF THE STRUCTURE. (STRUCTURE MUST WITHSTAND 11/2-FOOT HEAD OF WATER AND SEDIMENT WITHOUT COLLAPSING OR WITHSTANDING.)

- SUPPORT POSTS •• 2 x 2 INCH OR 2 x4 INCH HARDWOOD POSTS.
- THREE FEET LENGTH, MINIMUM. 1 x 2 INCH OR 1 x 3 INCH HARDWOOD CROSS BRACING LUMBER.
- STAPLES OR NAILS. GEOTEXTILE FABRIC.

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

PHYSICAL PROPERTY	WOVEN GEOTEXTILE FABRIC	NON-WOVEN GEOTEXTILE FABRIC	
FILTERING EFFICIENCY	85%	85%	
UV RESISTANCE (INHIBITORS AND STABILIZERS TO ENSURE SIX MONTH MINIMUM LIFE AT TEMPERATURES 0° TO 120° F)	70%	85%	
TEXTILE STRENGTH AT 20% ELONGATION STANDARD STRENGTH EXTRA STRENGTH	30 LBS. PER LINEAL INCH 50 LBS. PER LINEAL INCH	50 LBS. PER LINEAL INCH 70 LBS. PER LINEAL INCH	
SLURRY FLOW RATE	0.3 GAL./MIN./SQUARE FOOT	4.5 GAL./MIN./SQUARE FOO	
		1	



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

2. IF USING PRE-ASSEMBLED GEOTEXTILE FABRIC AND POSTS, DRIVE THE POSTS INTO THE SOIL, TIGHTLY STRETCHING THE GEOTEXTILE FABRIC BETWEEN POSTS AS EACH IS DRIVEN. (POSTS MUST BE PLACED ON THE INLET SIDE OF THE ANCHOR TRENCH WITH THE GEOTEXTILE FABRIC ON THE SIDE OF THE TRENCH FARTHEST FROM THE INLET.)

NOTE: IF ASSEMBLING THE GEOTEXTILE FABRIC AND POSTS ON—SITE, DRIVE THE POSTS INTO THE SOIL AND THEN SECURE THE GEOTEXTILE FABRIC TO THE POSTS BY PLACING A PIECE OF LATHE OVER THE FABRIC AND FASTENING IT TO THE POST (STRETCHING THE FABRIC BETWEEN POSTS AS IT IS FASTENED).

- 3. USE THE WRAP JOIN METHOD WHEN JOINING POSTS.
 4. PLACE THE BOTTOM 12 INCHES OF GEOTEXTILE FABRIC INTO THE EIGHT—INCH DEEP
- TRENCH, LAYING THE REMAINING FOUR INCHES IN THE BOTTOM OF THE TRENCH AND EXTENDING AWAY FROM THE INLET. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE. 6. BRACE THE POSTS BY NAILING BRACES INTO EACH CORNER POST OR UTILIZE RIGID

PANELS TO SUPPORT FABRIC. NOTE: IN SITUATIONS WHERE STORM WATER MAY BYPASS THE STRUCTURE,

- SET THE TOP OF THE GEOTEXTILE FABRIC FILTER AT LEAST SIX INCHES LOWER THAN THE GROUND ELEVATION ON THE DOWN-SLOPE SIDE OF THE STORM DRAIN INLET,
- . BUILD A TEMPORARY DIKE, COMPACTED TO SIX INCHES HIGHER THAN THE FABRIC, ON THE DOWN-SLOPE SIDE OF THE STORM DRAIN INLET,

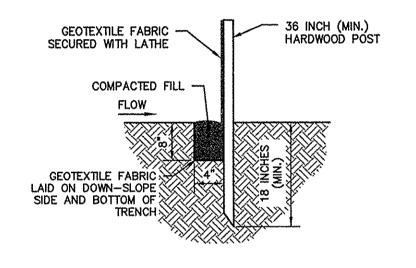
MAINTENANCE

INSPECT DAILY.

INSPECT GEOTEXTILE FABRIC AND MAKE NEEDED REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM POOL AREA TO PROVIDE STORAGE FOR THE NEXT STORM

. USE IN CONJUNCTION WITH EXCAVATED DROP INLET PROTECTION.

EVENT. AVOID DAMAGING OR UNDERCUTTING FABRIC DURING SEDIMENT REMOVAL. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. REMOVE SEDIMENT. PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL, GRADE AREA TO THE ELEVATION OF THE STORM DRAIN INLET TOP, THEN STABILIZE IMMEDIATELY.



NOTE: THIS MEASURE IS NOT RECOMMENDED FOR PAVED SURFACES DUE TO INABILITY TO ENTRENCH THE FABRIC AND LACK OF AN ANCHORING SYSTEM.

SEEDING SPECIFICATIONS SEEDBED PREPARATION GRADE AND APPLY SOIL AMENDMENTS.

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

DENSITY OF VEGETATIVE COVER EIGHTY PERCENT OR GREATER OVER THE SOIL SURFACE.

SOIL AMENDMENTS - SELECT MATERIALS AND RATES AS DETERMINED BY A SOIL TEST (CONTACT YOUR COUNTY SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE AND SOIL INFORMATION, INCLUDING AVAILABLE SOIL TESTING SERVICES) OR 400 TO 600 POUNDS OF 12-0-12 ANALYSIS FERTILIZER, OR EQUIVALENT. SEED - SELECT APPROPRIATE PLANT SPECIES SEED OR SEED MIXTURES ON THE BASIS OF QUICK

GERMINATION, GROWTH, AND TIME OF YEAR TO BE SEEDED (SEE TABLE 1). MULCH - STRAW, HAY, WOOD FIBER, ETC. (TO PROTECT SEEDBED, RETAIN MOISTURE, AND ENCOURAGE PLANT GROWTH). ANCHORED TO PREVENT REMOVAL BY WIND OR WATER OR COVERED WITH MANUFACTURED EROSION CONTROL BLANKETS.

TABLE 1. SLOPE STEEPNESS RESTRICTIONS

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

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

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

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

. TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS. 2. APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-0-12 ANALYSIS FERTILIZER, OR EQUIVALENT.

WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF THE SOIL WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE.

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

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

INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. CHECK FOR EROSION OR MOVEMENT OF MULCH AND REPAIR IMMEDIATELY. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80 PERCENT DENSITY); RESEED, FERTILIZE, AND

APPLY MULCH WHERE NECESSARY. IF NITROGEN DEFICIENCY IS APPARENT, TOP-DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

NOT TO SCALE

MULCH SPECIFICATIONS MATERIALS

TABLE 1. SLOPE STEEPNESS RESTRICTIONS

MATERIAL*	RATE PER ACRE	COMMENTS
STRAW OR HAY	2 TONS	SHOULD BE DRY, FREE OF UNDESIRABLE SEEDS. SPREAD BY HAND OR MACHINE. MUST BE CRIMPED OR ANCHORED (SEE TABLE 2).
WOOD FIBER OR CELLULOSE	1 TON	APPLY WITH A HYDRAULIC MULCH MACHINE AND USE WITH TACKING AGENT.

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

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

TABLE 2. MULCH ANCHORING METHODS

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

*ALL FORMS OF MULCH MUST BE ANCHORED TO PREVENT DISPLACEMENT BY

WND AND/OR WATER.

- MULCH APPLICATION

 1. APPLY MULCH AT THE RECOMMENDED RATE SHOWN IN TABLE 1.

 2. SPREAD THE MULCH MATERIAL UNIFORMLY BY HAND, HAYFORK, MULCH BLOWER, OR HYDRAULIC MULCH MACHINE. AFTER SPREADING, NO MORE THAN 25 PERCENT OF THE GROUND SHOULD BE VISIBLE.

 3. ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION. THE MULCH CAN BE ANCHORED USING ONE OF THE METHODS LISTED BELOW:
 - a. CRIMP WITH A MULCH ANCHORING TOOL, A WEIGHTED FARM DISK WITH DULL SERRATED BLADES SET STRAIGHT, OR TRACK CLEATS OF A BULLDOZER,
 - b. APPLY HYDRAULIC MULCH WITH SHORT CELLULOSE FIBERS, c. APPLY A LIQUID TACKIFIER, OR
 - d. COVER WITH NETTING SECURED BY STAPLES.

MULCH MAINTENANCE INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. . CHECK FOR EROSION OR MOVEMENT OF MULCH; REPAIR DAMAGED AREAS, RESEED, APPLY NEW MULCH

AND ANCHOR THE MULCH IN PLACE. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.
IF EROSION IS SEVER OR RECURRING, USE EROSION CONTROL BLANKETS OR OTHER MORE SUBSTANTIAL STABILIZATION METHODS TO PROTECT THE AREA.

- STORM SEWER PIPE TOP OF DAM - 1 3'± 1 OVERFLOW BOTTOM OF DAM SECTION B-B #8 STONE 1' MIN. THICKNESS) (1' MIN. THICKNESS)

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

DIVERSION RIDGE
WITH 3:1 SIDE SLOPE

#1 STONE ----

ROCK DONUT DETAIL NOT TO SCALE (REV. 09/15)

CROSS SECTION

150' MINIMUM

SECTION A-A

GEOTEXTILE FABRIC

-GEOTEXTILE FABRIC

-8" MINIMUM INDOT CA

NO. 2 AGGREGATE

STRUCTUREPOINT

INDY NE LODGING

ASSOCIATES, LLC

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11100062 STATE OF MOIANA

CERTIFIED BY: BRADLEY N. SCHRAGE

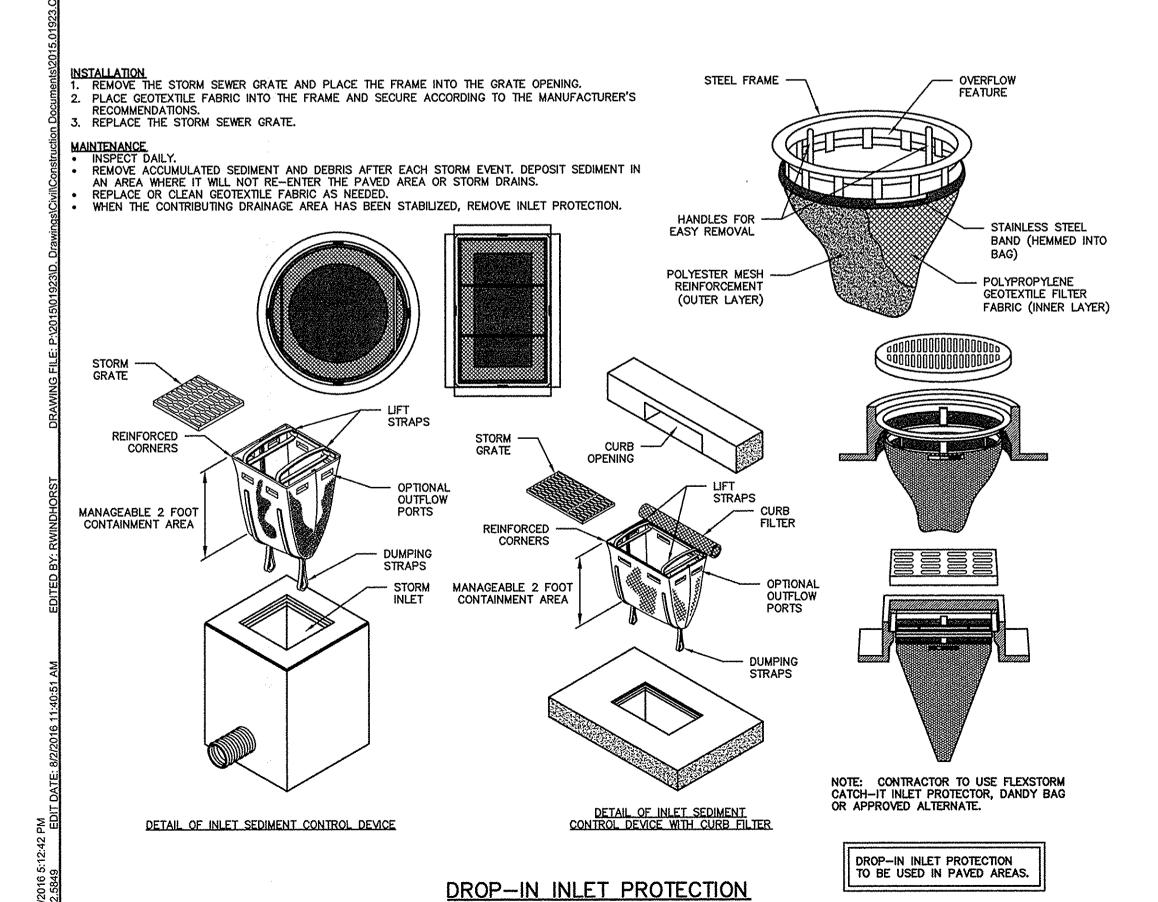
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REVISION SCHEDULE			
NO.	DESCRIPTION	DATE	
Λ	TAC & SWPPP COMMENTS	03/16/2016	
/2\	ACCESS DRIVE	04/13/2016	
3	TAC COMMENTS	05/04/2016	
4	ISSUED FOR CONSTRUCTION	06/13/2016	
5	UTILITY COORDINATION	08/03/2016	

2015.01923 Project Number

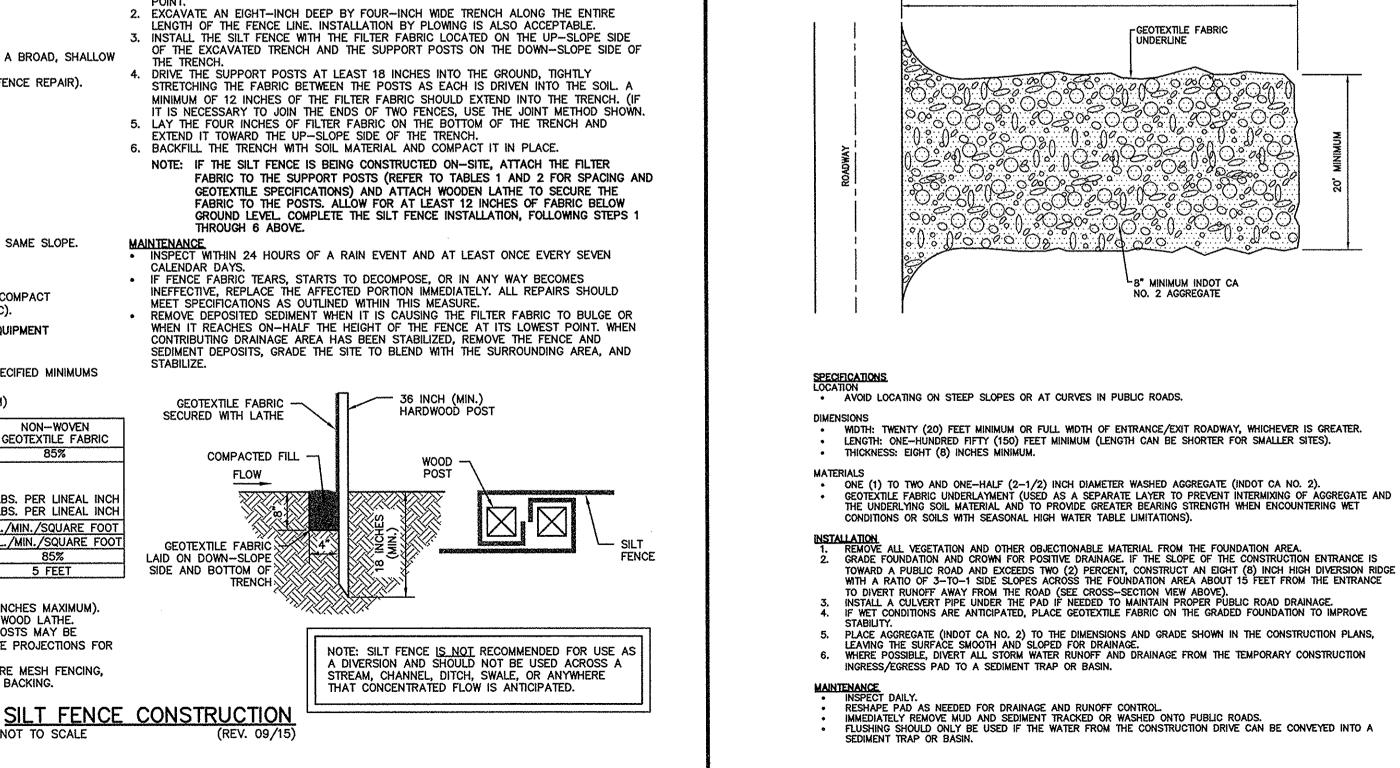
EROSION CONTROL DETAILS

TEMPORARY SEEDING WITH MULCH (REV. 09/15)



SILT FENCE INLET PROTECTION

1. LAY OUT THE LOCATION OF THE FENCE SO THAT IS IS PARALLEL TO THE CONTOUR OF THE SLOPE AND AT LEAST 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A LIMITED TO ONE—QUARTER ACRE PER 100 LINEAR FEET OF FENCE. SEDIMENT STORAGE AREA. TURN THE ENDS OF THE FENCE UP SLOPE SUCH THAT THE FURTHER RESTRICTED BY SLOPE STEEPNESS (SEE TABLE 1). POINT OF CONTACT BETWEEN THE GROUND AND THE BOTTOM OF THE FENCE END TERMINATES AT A HIGHER ELEVATION THAN THE TOP OF THE FENCE AT ITS LOWEST EFFECTIVE LIFE SIX MONTHS (MAXIMUM). 2. EXCAVATE AN EIGHT-INCH DEEP BY FOUR-INCH WIDE TRENCH ALONG THE ENTIRE LENGTH OF THE FENCE LINE. INSTALLATION BY PLOWING IS ALSO ACCEPTABLE. INSTALL THE SILT FENCE WITH THE FILTER FABRIC LOCATED ON THE UP-SLOPE SIDE . INSTALLED PARALLEL TO THE SLOPE CONTOUR. OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN-SLOPE SIDE OF . MINIMUM OF 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A BROAD, SHALLOW 4. DRIVE THE SUPPORT POSTS AT LEAST 18 INCHES INTO THE GROUND, TIGHTLY ACCESSIBLE FOR MAINTENANCE (REMOVAL OF SEDIMENT AND SILT FENCE REPAIR). STRETCHING THE FABRIC BETWEEN THE POSTS AS EACH IS DRIVEN INTO THE SOIL. A SPACING TABLE 1. SLOPE STEEPNESS RESTRICTIONS 5. LAY THE FOUR INCHES OF FILTER FABRIC ON THE BOTTOM OF THE TRENCH AND EXTEND IT TOWARD THE UP-SLOPE SIDE OF THE TRENCH 6. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE. NOTE: IF THE SILT FENCE IS BEING CONSTRUCTED ON-SITE, ATTACH THE FILTER GEOTEXTILE SPECIFICATIONS) AND ATTACH WOODEN LATHE TO SECURE THE > 20% > 5:1 THROUGH 6 ABOVE. *CONSIDER OTHER ALTERNATIVES. NOTE: MULTIPLE ROWS OF SILT FENCE ARE NOT RECOMMENDED ON THE SAME SLOPE. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. . DEPTH: EIGHT INCHES MINIMUM. IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. ALL REPAIRS SHOULD WIDTH: FOUR INCHES MINIMUM. AFTER INSTALLING THE FENCE, BACKFILL WITH SOIL MATERIAL AND COMPACT MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE. (TO BURY AND ANCHOR THE LOWER PORTION OF THE FENCE FABRIC). REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE FILTER FABRIC TO BULGE OR WHEN IT REACHES ON-HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. WHEN NOTE: AN ALTERNATIVE TO TRENCHING IS TO USE MECHANICAL EQUIPMENT CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND TO PLOW IN THE SILT FENCE. MATERIALS AND SILT FENCE SPECIFICATIONS STABILIZE. FABRIC - WOVEN OR NON-WOVEN GEOTEXTILE FABRIC, MEETING SPECIFIED MINIMUMS OUTLINED IN TABLE 2. — 36 INCH (MIN.) TABLE 2. GEOTEXTILE FABRIC SPECIFICATIONS FOR SILT FENCE (MINIMUM) GEOTEXTILE FABRIC -HARDWOOD POST SECURED WITH LATHE NON-WOVEN PHYSICAL PROPERTY GEOTEXTILE FABRIC GEOTEXTILE FABRIC 85% FILTERING EFFICIENCY COMPACTED FILL TEXTILE STRENGTH AT 20% 50 LBS. PER LINEAL INCH 70 LBS. PER LINEAL INCH STANDARD STRENGTH 30 LBS. PER LINEAL INCH 50 LBS, PER LINEAL INCH EXTRA STRENGTH 0.3 GAL./MIN./SQUARE FOOT 4.5 GAL./MIN./SQUARE FOO 15 GAL./MIN./SQUARE FOOT 220 GAL./MIN./SQUARE FO WATER FLOW RATE GEOTEXTILE FABRIC JV RESISTANCE LAID ON DOWN-SLOPE SIDE AND BOTTOM OF POST SPACING NOTE: SILT FENCES CAN BE PURCHASED COMMERCIALLY. HEIGHT - A MINIMUM OF 18 INCHES ABOVE GROUND LEVEL (30 INCHES MAXIMUM). REINFORCEMENT - FABRIC SECURELY FASTENED TO POSTS WITH WOOD LATHE. SUPPORT POSTS - 2x2 INCH HARDWOOD POSTS. STEEL FENCE POSTS MAY BE SUBSTITUTED FOR HARDWOOD POSTS (STEEL POSTS SHOULD HAVE PROJECTIONS FOR FASTENING FABRIC). SPACING - EIGHT FEET MAXIMUM IS FENCE IS SUPPORTED BY WIRE MESH FENCING, SIX FEET MAXIMUM FOR EXTRA-STRENGTH FABRIC WITHOUT WIRE BACKING.



SPECIFICATIONS SITE MANAGEMENT

COMPLETE CONSTRUCTION/INSTALLATION OF THE SYSTEM AND HAVE WASHOUT LOCATIONS OPERATIONAL PRIOR TO CONCRETE DELIVERY. DO NOT WASH OUT CONCRETE TRUCKS OR EQUIPMENT INTO STORM DRAINS, WETLANDS, STREAMS, RIVERS, CREEKS, DITCHES, OR

TO DISPOSE OF EXCESS CONCRETE OR RESIDUAL LOADS DUE TO THE POTENTIAL TO EXCEED THE DESIGN CAPACITY OF THE WASHOUT

- NEVER WASH OUT INTO A STORM SEWER DRAINAGE SYSTEM. THESE SYSTEMS ARE TYPICALLY CONNECTED TO A NATURAL CONVEYANCE
- WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS. IT IS RECOMMENDED THAT WASHOUT SYSTEMS BE RESTRICTED TO WASHING CONCRETE FROM MIXER AND PUMP TRUCKS AND NOT USED
- SYSTEM, SMALL AMOUNTS OF EXCESS OR RESIDUAL CONCRETE (NOT WASHOUT WATER) MAY BE DISPOSED OF IN AREAS THAT WILL NOT RESULT IN FLOW TO AN AREA THAT IS TO BE PROTECTED. INSTALL SYSTEMS AT STRATEGIC LOCATIONS THAT ARE CONVENIENT AND IN CLOSE PROXIMITY TO WORK AREAS AND IN SUFFICIENT NUMBER TO ACCOMMODATE THE DEMAND FOR DIPOSAL

INSTALL SIGNAGE IDENTIFYING THE LOCATION OF CONCRETE WASHOUT SYSTEMS.

LOCATE CONCRETE WASHOUT SYSTEMS AT LEAST 50 FEET FROM ANY CREEKS, WETLANDS, DITCHEST, KARST FEATURES, OR STORM

- DRAINS/MANMADE CONVEYANCE SYSTEMS. TO THE EXTENT PRACTICAL, LOCATE CONCRETE WASHOUT SYSTEMS IN RELATIVELY FLAT AREAS THAT HAVE ESTABLISHED VEGETATIVE
- COVER AND DO NOT RECEIVE RUNOFF FROM ADJACENT LAND AREAS. LOCATE IN AREAS THAT PROVIDE EASY ACCESS FOR CONCRETE TRUCKS AND OTHER CONSTRUCTION EQUIPMENT LOCATE AWAY FROM OTHER CONSTRUCTION TRAFFIC TO REDUCE THE POTENTIAL FOR DAMAGE TO THE SYSTEM.

THE STRUCTURE OR SYSTEM SHALL BE DESIGNED TO CONTAIN THE ANTICIPATED WASHOUT WATER ASSOCIATED WITH CONSTRUCTION

- THE SYSTEM SHALL BE DESIGNED, TO THE EXTENT PRACTICAL, TO ELIMINATE RUNOFF FROM ENTERING THE WASHOUT SYSTEM. RUNOFF FROM A RAINSTORM OR SNOWMELT SHOULD NOT CARRY WASTES AWAY FROM THE WASHOUT LOCATION.
- WASHOUT WILL NOT IMPACT FUTURE LAND USES (I.E., OPEN SPACES, LANDSCAPED AREAS, HOME SITES, PARKS) WASHOUT SYSTEMS/CONTAINMENTS MEASURES MAY ALSO BE UTILIZED ON SMALLER INDIVIDUAL BUILDING SITES. THE DESIGN AND SIZE

OF THE SYSTEM CAN BE ADJUSTED TO ACCOMMODATE THE EXPECTED CAPACITY.

- PREFABRICATED WASHOUT SYSTEMS/CONTAINERS SELF-CONTAINED STURDY CONTAINMENT SYSTEMS THAT ARE DELIVERED TO A SITE AND LOCATED AT STRATEGIC LOCATIONS FOR
- THESE SYSTEMS ARE MANUFACTURED TO RESIST DAMAGE FROM CONSTRUCTION EQUIPMENT AND PROTECT AGAINST LEAKS OR SPILLS. MANUFACTURER OR SUPPLIER PROVIDES THE CONTAINERS. THE PROJECT SITE MANAGER MAINTAINS THE SYSTEM OR THE SUPPLIER
- PROVIDES COMPLETE SERVICE THAT INCLUDES MAINTENANCE AND DISPOSAL UNITS ARE OFTEN AVAILABLE WITH OR WITHOUT RAMPS. UNITS WITH RAMPS LEND THEMSELVES TO ACCOMMODATE PUMP TRUCKS.
- MAINTAIN ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

DESIGNED AND INSTALLED UNITS

THESE UNITS ARE DESIGNED AND INSTALLED ON SITE. THEY TEND TO BE LESS RELIABLE THAN PREFABRICATED SYSTEMS ARE OFTEN PRONE TO FAILURE. CONCRETE WASHOUT SYSTEMS CAN BE CONSTRUCTED ABOVE OR BELOW GRADE. IT IS NOT UNCOMMON TO HAVE A SYSTEM THAT IS PARTLY BELOW GRADE WITH AN ADDITIONAL CONTAINMENT STRUCTURE ABOVE GRADE. WASHOUT SYSTEMS SHALL UTILIZE A PIT OR BERMED AREA DESIGNED AND MAINTAINED AT A CAPACITY TO CONTAIN ALL LIQUID AND

CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. THE VOLUME OF THE SYSTEM MUST ALSO BE DESIGNED TO CONTAIN RUNOFF THAT DRAINS TO THE SYSTEM AND RAINFALL THAT ENTERS THE SYSTEM FOR A TWO-YEAR FREQUENCY, 24-HOUR STORM EVENT.

- A WASHOUT SYSTEM INSTALLED BELOW GRADE SHOULD BE A MINIMUM OF TEN FEET WIDE BY TEN FEET LONG, BUT SIZED TO CONTAIN ALL LIQUID AND WASTE THAT IS EXPECTED TO BE GENERATED BETWEEN SCHEDULED CLEANOUT PERIODS. THE SIZE OF THE PIT MAY BE LIMITED BY THE SIZE OF THE POLYETHYLENE AVAILABLE. THE POLYETHYLENE LINING SHOULD BE ADEQUATE SIZE TO EXTEND OVER THE
- ENTIRE EXCAVATION. INCLUDE A MINIMUM 12-INCH FREEBOARD TO REASONABLY ENSURE THAT THE STRUCTURE WILL NOT OVERTOP DURING A RAIN EVENT.
- LINE THE PIT WITH TEN MILLIMETER POLYETHYLENE LINING TO CONTROL SEEPAGE. THE BOTTOM OF EXCAVATED PIT SHOULD BE ABOVE THE SEASONAL HIGH WATER TABLE.

- A SYSTEM DESIGNED AND BUILT ABOVE GRADE SHOULD BE A MINIMUM OF TEN FEET WIDE BY TEN FEET LONG, BUT SIZED TO CONTAIN ALL LIQUID AND WASTE THAT IS EXPECTED TO BE GENERATED BETWEEN SCHEDULED CLEANOUT PERIODS. THE SIZE OF THE CONTAINMENT SYSTEM MAY BE LIMITED BY THE SIZE OF POLYETHYLENE AVAILABLE. THE POLYETHYLENE LINING SHOULD BE OF ADEQUATE SIZE TO EXTEND OVER THE BERM OR CONTAINMENT SYSTEM.
- THE SYSTEM DESIGN MAY UTILIZE AN EARTHEN BERM, STRAW BALES, SANDBAGS, OR OTHER ACCEPTABLE BARRIERS THAT WILL MAINTAIN ITS SHAPE AND INTEGRITY AND SUPPORT THE POLYETHYLENE LINING.
- INCLUDE A MINIMUM FOUR-INCH FREEBOARD AS PART OF THE DESIGN.

METAL PINS ORT

WASHOUT PROCEDURES

METAL PINS OR STAPLES TO-

SECURE THE POLYETHYLENE

LINING TO THE STRAW BALES

DO NOT LEAVE EXCESS MUD IN THE CHUTES OR HOPPER AFTER THE POUR. EVERY EFFORT SHOULD BE MADE TO EMPTY THE CHUTES

PLAN YEW

POLYETHYLENE-

COMPACTED SOIL~ MATERIAL

STRAW BALES ENTRENCHED

4 INCHES INTO THE SOIL

SECTION A-A

ABOVE GRADE SYSTEM

CONCRETE WASH OUT

LINING (10MM)

METAL PINS OR-

WOOD OR METAL STAKES TO

PER STRAW BALE)

SECURE THE STRAW BALES (2

-STRAW BALE (ALTERNATIVE MATERIALS OR

PRODUCTS MAY BE USED TO PROVIDE

STRUCTURAL CONTAINMENT, ALTERNATIVE

MATERIALS OR PRODUCTS WILL REQUIRE

NOTE: CONCRETE WASHOUT SHALL

REQUIRE AN IDENTIFICATION SIGN.

DESIGN MODIFICATION.

POLYETHYLENE LINING (10 MILLIMETERS); THE LINING

SHOULD EXTEND OVER

THE STRAW BALES.

METAL STAKE

AND HOPPER AT THE POUR. THE LESS MATERIAL LEFT IN THE CHUTES AND HOPPER, THE QUICKER AND EASIER THE CLEANOUT. SMALL AMOUNTS OF EXCESS CONCRETE (NOT WASHOUT WATER) MAY BE DISPOSED OF IN AREAS THAT WILL NOT RESULT IN FLOW TO AN AREA THAT IS TO BE PROTECTED.

AT THE WASHOUT LOCATION, SCRAPE AS MUCH MATERIAL FROM THE CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON-WATER CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE. REMOVE AS MUCH MUD AS POSSIBLE WHEN WASHING OUT. STOP WASHING OUT IN AN AREA IF YOU OBSERVE WATER RUNNING OFF THE DESIGNATED AREA OR IF THE CONTAINMENT SYSTEM IS

LEAKING OR OVERFLOWING AND INEFFECTIVE. DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE. BACK FLUSHING SHOULD BE RESTRICTED TO THE PLANT AS IT GENERATES LARGE VOLUMES OF WASTE THAT MORE THAN LIKELY WILL EXCEED THE CAPACITY OF MOST WASHOUT SYSTEMS. IF AN EMERGENCY ARISES, BACK FLUSH SHOULD ONLY BY PERFORMED WITH THE PERMISSION OF AN ON-SITE MANAGER FOR THE PROJECT.

DO NOT USE ADDITIVES WITH WASH WATER. DO NOT USE SOLVENTS OR ACIDS THAT MAY BE USED AT THE TARGET PLANT. MATERIALS MINIMUM OF TEN MIL POLYETHYLENE SHEETING THAT IS FREE OF HOLES, TEARS, AND OTHER DEFECTS. THE SHEETING SELECTED SHOULD BE OF AN APPROPRIATE SIZE TO FIT THE WASHOUT SYSTEM WITHOUT SEAMS OR OVERLAP OF THE LINING (DESIGNED AND INSTALLED

SYSTEMS). SIGNAGE. ORANGE SAFETY FENCING OR EQUIVALENT.

STRAW BALES, SANDBAGS (BAGS SHOULD BE ULTRAVIOLET-STABILIZED GEOTEXTILE FABRIC), SOIL MATERIAL, OR OTHER APPROPRIATE MATERIALS THAT CAN BE USED TO CONSTRUCT A CONTAINMENT SYSTEM (ABOVE GRADE SYSTEMS). METAL PINS OR STAPLES AT A MINIMUM OF SIX INCHES IN LENGTH, SANDBAGS, OR ALTERNATIVE FASTENER TO SECURE POLYETHYLENE LINING TO THE CONTAINMENT SYSTEM.

PREFABRICATED WASHOUT SYSTEMS/CONTAINERS

• INSTALL AND LOCATE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. DESIGNED AND INSTALLED SYSTEMS

UTILIZE AND FOLLOW THE DESIGN IN THE STORM WATER POLLUTION PREVENTION PLAN TO INSTALL THE SYSTEM. DEPENDENT UPON THE TYPE OF SYSTEM, EITHER EXCAVATE THE PIT OR INSTALL THE CONTAINMENT SYSTEM.

A BASE SHALL BE CONSTRUCTED AND PREPARED THAT IS FREE OF ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE LINING. INSTALL THE POLYETHYLENE LINING. FOR EXCAVATED SYSTEMS, THE LINING SHOULD EXTEND OVER THE ENTIRE EXCAVATION. THE LINING FOR BERMED SYSTEMS SHOULD BE INSTALLED OVER THE POOLING AREA WITH ENOUGH MATERIAL TO EXTEND THE LINING OVER THE

PLACE FLAGS, SAFETY FENCING, OR EQUIVALENT TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND OTHER TRAFFIC. PLACE A NON-COLLAPSING, NON-WATER HOLDING COVER OVER THE WASHOUT FACILITY PRIOR TO A PREDICTED RAINFALL EVENT TO PREVENT ACCUMULATION OF WATER AND POSSIBLE OVERFLOW OF THE SYSTEM (OPTIONAL).

POST SIGNS DIRECTING CONTRACTORS AND SUPPLIERS TO DESIGNATED LOCATIONS.

NON-COLLAPSING AND NON-WATER HOLDING COVER FOR USE DURING RAIN EVENTS (OPTIONAL).

INSPECT DAILY AND AFTER EACH STORM EVENT. INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.

INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES.

EXCESS CONCRETE SHOULD BE REMOVED WHEN THE WASHOUT SYSTEM REACHES 50 PERCENT OF THE DESIGN CAPACITY. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE. PREFABRICATED SYSTEMS SHOULD ALSO UTILIZE THIS CRITERION, UNLESS THE MANUFACTURER HAS ALTERNATE SPECIFICATIONS. UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE. REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM. DISPOSE OF ALL CONCRETE IN A LEGAL MANNER. REUSE THE MATERIAL ON SITE, RECYCLE OR HAUL THE MATERIAL TO AN APPROVED CONSTRUCTION/DEMOLITION LANDFILL SITE, RECYCLING OF MATERIAL IS ENCOURAGED. THE WASTE MATERIAL CAN BE USED FOR MULTIPLE APPLICATIONS INCLUDING BUT NOT LIMITED TO ROADBEDS AND BUILDING. THE AVAILABILITY FOR RECYCLING SHOULD BE

CHECKED LOCALLY. THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING. THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE CONCRETE WASHOUT SYSTEMS ARE DESIGNED TO PROMOTE EVAPORATION, HOWEVER, IF THE LIQUIDS DO NO EVAPORATE AND THE SYSTEM IS NEAR CAPACITY IT MAY BE NECESSARY TO VACUUM OR REMOVE THE LIQUIDS AND DISPOSE OF THEM IN AN ACCEPTABLE METHOD. DISPOSAL MAY BE ALLOWED AT THE LOCAL SANITARY SEWER AUTHORITY PROVIDED THEIR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMITS ALLOW FOR ACCEPTANCE OF THIS MATERIAL. ANOTHER OPTION WOULD BE TO UTILIZE A SECONDARY

PREFABRICATED UNITS ARE OFTEN PUMPED AND THE COMPANY SUPPLYING THE UNIT PROVIDES THIS SERVICE. INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASHOUT AREAS. IF CONCRETE WASTE IS BEING DISPOSED OF IMPROPERLY, IDENTIFY THE VIOLATORS AND TAKE

ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM. HOLES, DEPRESSIONS AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND

Protected

Riser pipe crest elevation = 830.7

 $C_0 = Channel Depth$

 C_{W} = Channel Width

 $R_W = Ridge Width$

BERM OR CONTAINMENT SYSTEM. THE LINING SHOULD BE SECURED WITH PINS, STAPLES, OR OTHER FASTENERS. INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS. WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD FOR CONCRETE WASHOUT SYSTEMS. INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL. CONTAINMENT SYSTEM OR BASIN FOR FUTURE DEWATERING. WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF

Allowance for

Emergency spillway crest elevation = 831.7

barrel/pipe

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993.

Hand-compacted fill around

pipe and anti-seep collar

ES_w = Emergency Spillway Width

NOTE: For minimum dimensions see the

"Specifications" section of this measure.

FB₀ = Free Board Depth

— 6 inch freeboard

— All constructed slopes

3: 1 or flatter

Flood pool elevation = 832.1

trench

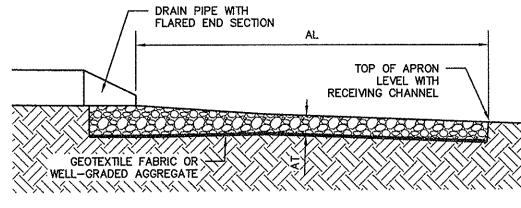
← ES_w = <u>20</u> feet →

TEMPORARY DRY SEDIMENT BASIN

SPILLWAY

TEMPORARY DIVERSION SWALE

 $C_5 = 1.5$ feet



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

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

TEN FEET PER SECOND.

NOTE: AW IS THE APRON WIDTH AT THE

NARROW END OF THE APRON.

· ALIGNED STRAIGHT WITH CHANNEL FLOW. IF A CURVE IS NECESSARY TO ALIGN THE APRON WITH THE RECEIVING STREAM, LOCATE THE CURVE IN THE UPSTREAM SECTION OF THE APRON. 1.2 TIMES THE MAXIMUM STONE DIAMETER FOR A d₅₀ STONE SIZE OF 15 INCHES OR LARGER.
 1.5 TIMES THE MAXIMUM STONE DIAMETER FOR A d₅₀ STONE SIZE OF 15 INCHES OR LESS.

TABLE 1. SIZING FOR FLOW DISSIPATERS AT CULVERT PIPE OUTLETS

PIPE SIZE	AVERAGE RIPRAP DIAMETER	APRON WIDTH*	APRON LENGTH**
8 IN.	6 IN. MIN.	2 TO 3 FT.	5 TO 7 FT.
12 IN.	6 IN. MIN.	3 TO 4 FT.	6 TO 12 FT.
18 IN.	6 IN. MIN.	4 TO 6 FT.	8 TO 18 FT.
24 IN.	6 IN. MIN.	6 TO 8 FT.	12 TO 22 FT.
30 IN.	6 IN. MIN.	8 TO 10 FT.	14 TO 28 FT.
36 IN.	6 IN. MIN.	10 TO 12 FT.	16 TO 32 FT.
48 IN.	6 IN. MIN.	12 TO 14 FT.	18 TO 36 FT.

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

STONE PLACED AROUND END OF DRAIN PIPE TO PREVENT SLOPE DRAIN PIPE EROSION AND UNDERCUTTING OF GEOTEXTILE FABRI OR WELL-GRADED PIPE DISCHARGE AGGREGATE

RIPRAF

•• HARD, ANGULAR, HIGHLY WEATHER RESISTANT. SPECIFIC GRAVITY OF AT LEAST 2.5.

CHECK FOR PIPING OR UNDERCUTTING; REPAIR IMMEDIATELY.

- SIZE AND GRADATION THAT WILL WITHSTAND VELOCITIES OF STORM WATER DISCHARGE FLOW
- WELL-GRADED MIXTURE OF STONE WITH 50 PERCENT OF THE STONE PIECES, BY WEIGHT, LARGER THAN THE d₅₀ SIZE AND THE DIAMETER OF THE LARGEST STONE EQUAL TO 1.5 TIMES
- GEOTEXTILE FABRIC OR WELL-GRADED AGGREGATE (INDOT CA NO. 9, 11, OR 12).

INSTALLATION 1. DIVERT SURFACE WATER RUNOFF AROUND THE STRUCTURE DURING CONSTRUCTION SO THAT THE SITE CAN BE PROPERLY DEWATERED FOR FOUNDATION PREPARATION. 2. EXCAVATE FOUNDATION AND APRON AREA SUBGRADES BELOW DESIGN ELEVATION TO ALLOW FOR

THIS THICKNESS OF FILTER MEDIUM AND RIPRAP. 3. COMPACT ANY FILL USED IN SUBGRADE PREPARATION TO THE DENSITY OF SURROUNDING UNDISTURBED SOIL MATERIAL.

. SMOOTH SUBGRADE ENOUGH TO PROTECT GEOTEXTILE FABRIC FROM TEARING. 5. PLACE GEOTEXTILE FABRIC OR AGGREGATE BEDDING MATERIAL (FOR STABILIZATION AND FILTRATION) ON THE COMPACTED AND SMOOTHED FOUNDATION. 6. INSTALL RIPRAP TO THE LINES AND ELEVATIONS SHOWN IN THE CONSTRUCTION PLANS. BLEND

RIPRAP SMOOTHLY TO SURROUNDING GRADE. IF THE CHANNEL IS WELL DEFINED, EXTEND THE APRON ACROSS THE CHANNEL BOTTOM AND UP THE CHANNEL BANKS TO AN ELEVATION OF SIX INCHES ABOVE THE MAXIMUM TAILWATER DEPTH OR THE TOP OF THE BANK, WHICHEVER IS LESS. 7. IF GEOTEXTILE FABRIC TEARS WHEN PLACING RIPRAP, REPAIR IMMEDIATELY BY LAYING AND STAPLING A PIECE OF FABRIC OVER DAMAGED AREA, OVERLAPPING THE UNDAMAGED AREAS BY

AT LEAST 12 INCHES. 8. CONSTRUCT A SMALL PLUNGE POOL WITHIN THE OUTLET APRON. (RIPRAP APRONS MUST BE LEVEL WITH OR SLIGHTLY LOWER THAN THE RECEIVING CHANNEL AND SHOULD NOT PRODUCE AN OVERFALL OR RESTRICT FLOW OF THE WATER CONVEYANCE STRUCTURE.)

INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR

• INSPECT FOR STONE DISPLACEMENT; REPLACE STONES ENSURING PLACEMENT AT FINISHED GRADE. CHECK FOR EROSION OR SCOURING AROUND SIDES OF THE APRON; REPAIR IMMEDIATELY.



Dandy Solutions for Stormwater Sediment Control

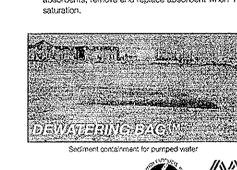
The Dandy Dawatering Bag™ is designed to control sediment discharge in dewatering applications where water is being pumped. When the pumped water reaches the Dandy Dewatering Bag™, the suspended solids are

allowed to settle out of the slowed flow and are captured FEATURES AND BENEFITS

. Easily installs onto discharge hose . Easier and more convenient to use than sediment traps or other alternatives Available with optional oil absorbents Fabricated from a Mirafia geotextile

 Available in 4 standard sizes: 3x3ft, 6x6ft, 10x15ft, INSTALLATION AND MAINTENANCE GUIDELINES • Installation: Place lifting straps (not included) under the unit to facilitate removal after use. Unfold Dandy Dewatering Bag*** on a stabilized area over dense vegetation,

straw, or gravel (if an increased drainage surface is needed). Insert discharge hose from pump into Dandy Dewatering Bag™ a minimum of six inches (6") and tightly secure with attached strap to prevent water from flowing out of the unit without being filtered. If using optional absorbents, place absorbent boom into the Dandy Dewatering Bag™ of the unit. Clip absorbent boom to tether provided inside the unit. Maintenance: Replace the unit when 1/2 full of sediment or when sediment has reduced the flow rate of the pump discharge to an impractical rate. If using optional oil absorbents; remove and replace absorbent when inear



Dandy Dewatering Bag™ Dandy Solutions for Stormwater Sediment Control

Technical Data

Geotextile Technical Data izeb Tensile Strength (MD x CD) ASTM D 4632 KN ('00) 1.62 (365) x 0.89 (200) ASTM D 4632 usen Burst Strength ASTM 0 3788 0.56 (80) rapezoid Tear Strength (MD x CD) ASTM D 4533 kN (bs) 0.51 (115) x 0.33 (75) COE -22125-85 ASTM D 4751 ASTM D 4491 ASTM D 4491

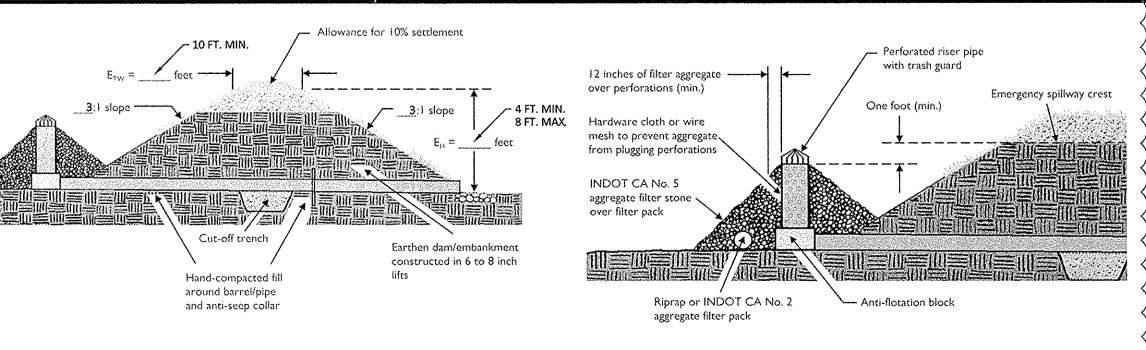
ASTM 0 4355

Black & Oral Voo

POS POP/DEWATER 0004

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E,, = Earthen Dam/Embankment Height E_{tw} = Earthen Dam/Embankment Top Width NOTE: For minimum dimensions see the

"Specifications" section of this measure.

TEMPORARY DRY SEDIMENT BASIN EARTHEN DAM/EMBANKMENT WORKSHEET NOT TO SCALE

NOTE: For minimum dimensions see the "Specifications" section of this measure.

TEMPORARY DRY SEDIMENT BASIN RISER PIPE

INDY NE LODGING

ASSOCIATES, LLC

5701 PROGRESS ROAD

INDIANAPOLIS, IN, 46241

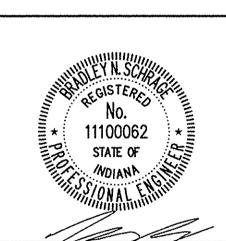
STRUCTUREPOIN^{*}

7260 Shadeland Station | Indianapolis, Indiana 46256

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OLIO ROAD AND **TEGLER DRIVE.** NOBLESVILLE, IN



CERTIFIED BY: BRADLEYN. SCHRAGE **ISSUANCE INDEX**

DATE: 11/30/2015 PROJECT PHASE: CONSTRUCTION DOCUMENTS

REVISION SCHEDULE NO. DESCRIPTION DATE TAC & SWPPP COMMENTS | 03/16/2016 ACCESS DRIVE 04/13/2016 TAC COMMENTS 05/04/2016 ISSUED FOR CONSTRUCTION 06/13/2016 UTILITY COORDINATION 08/03/2016

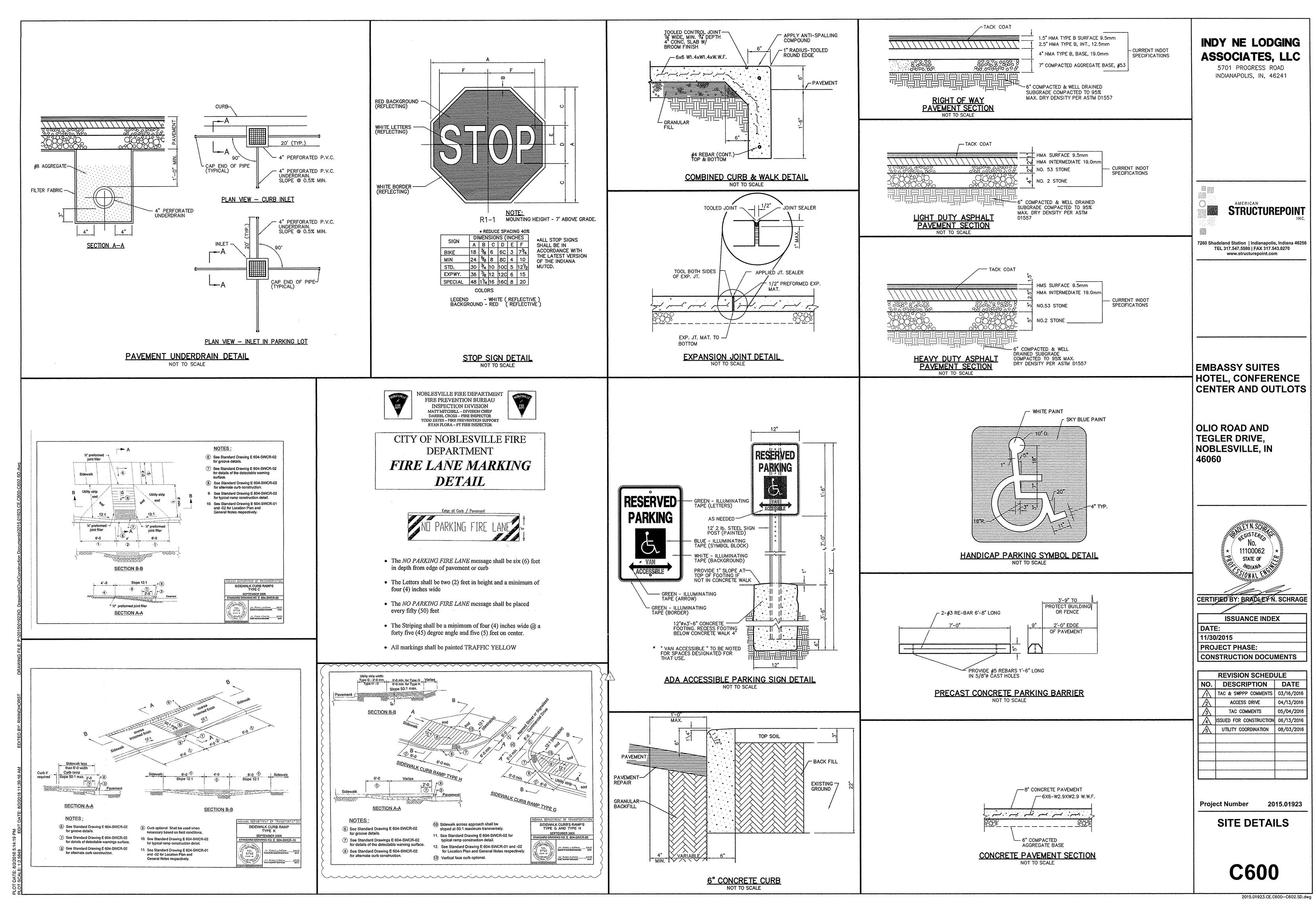
Project Number 2015.01923

EROSION CONTROL DETAILS

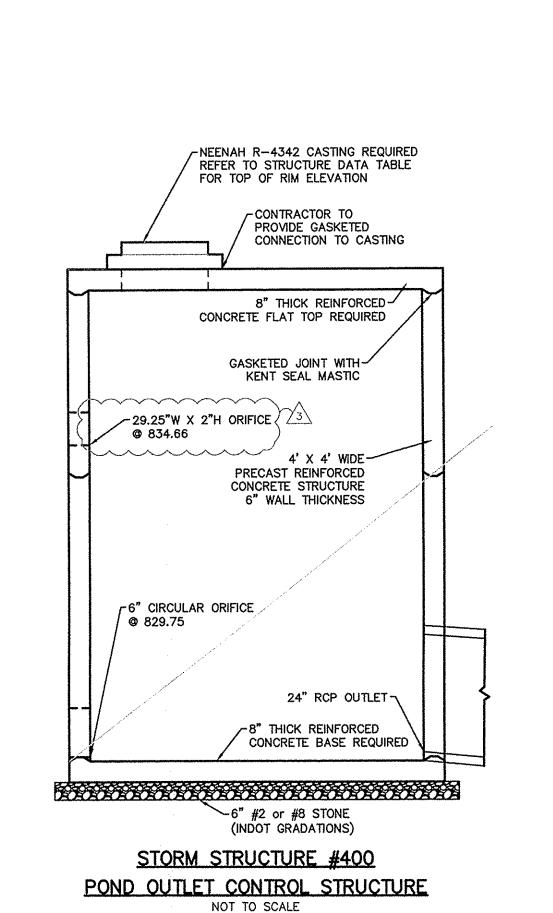
C52

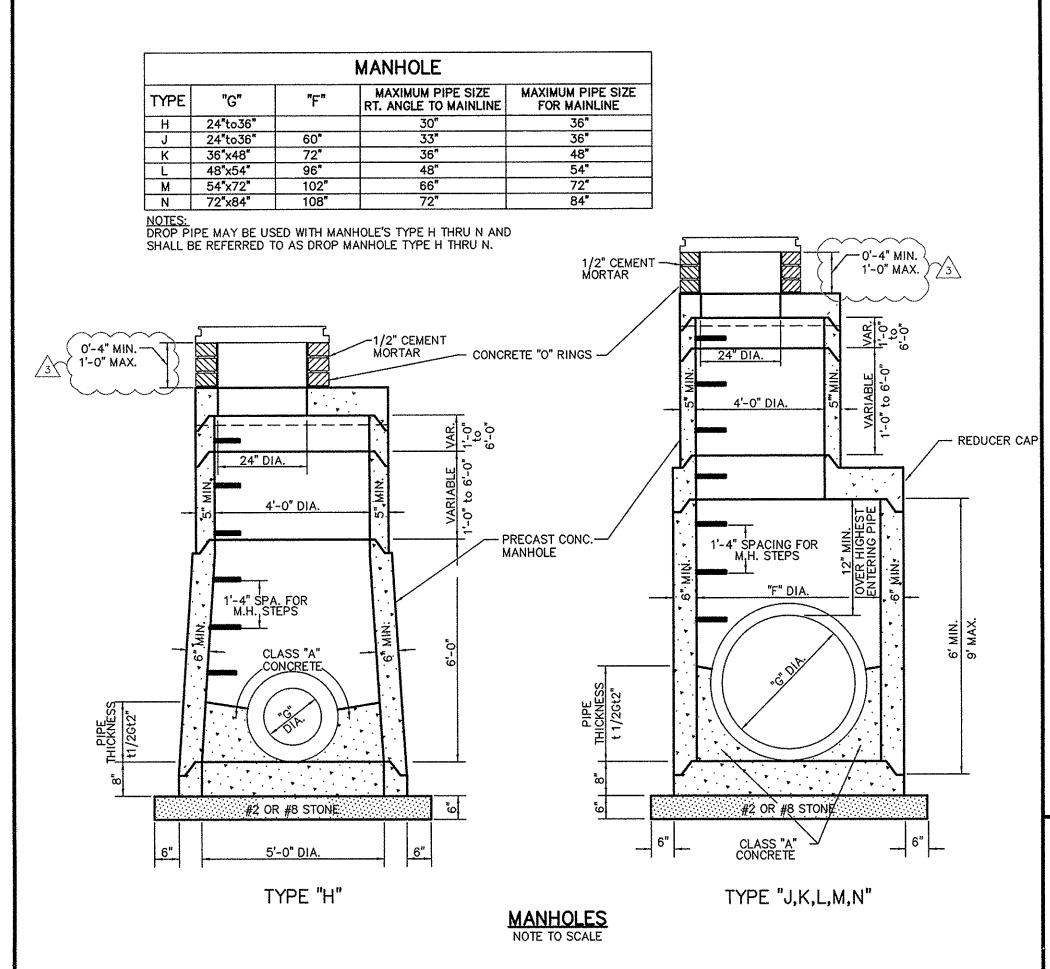
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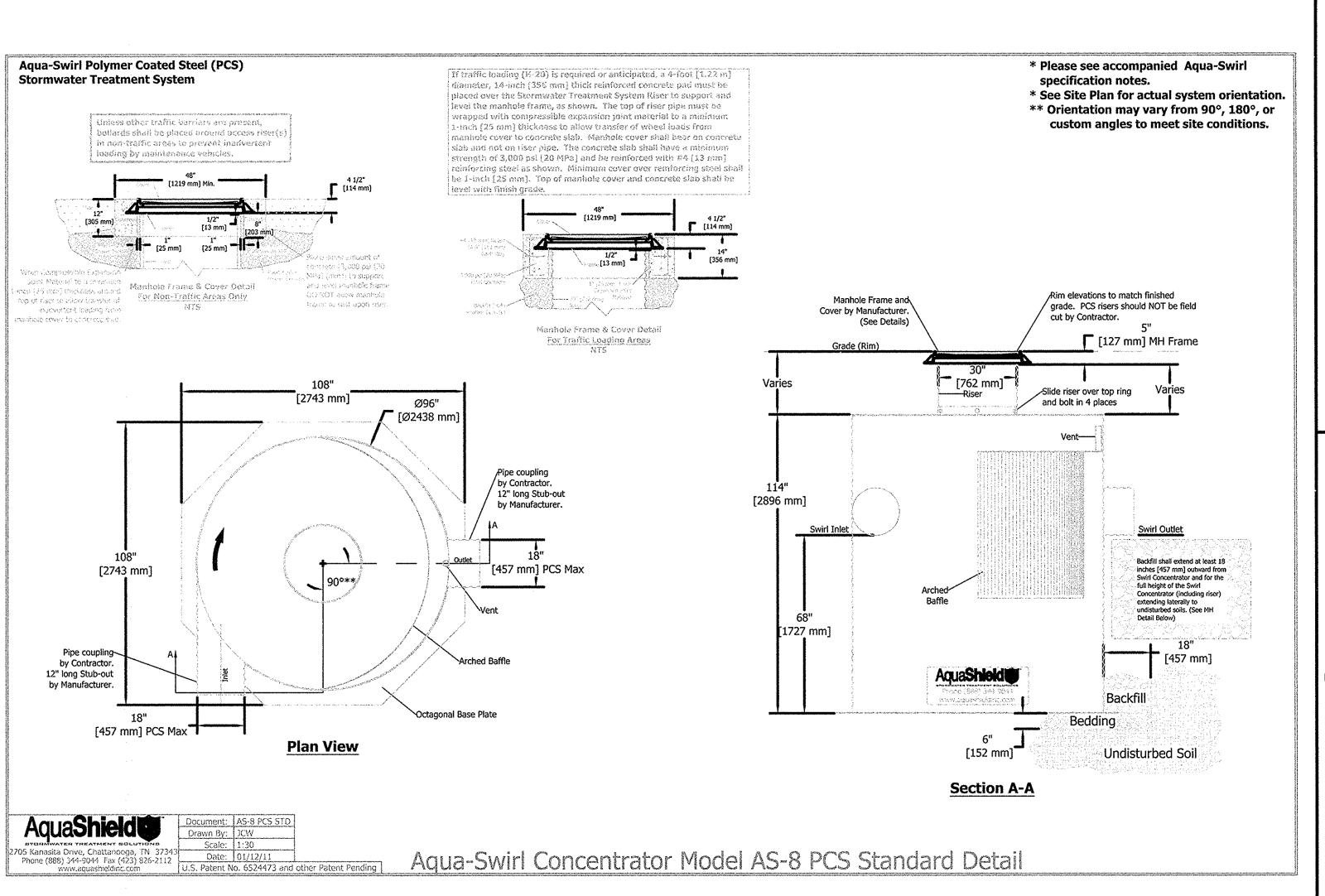
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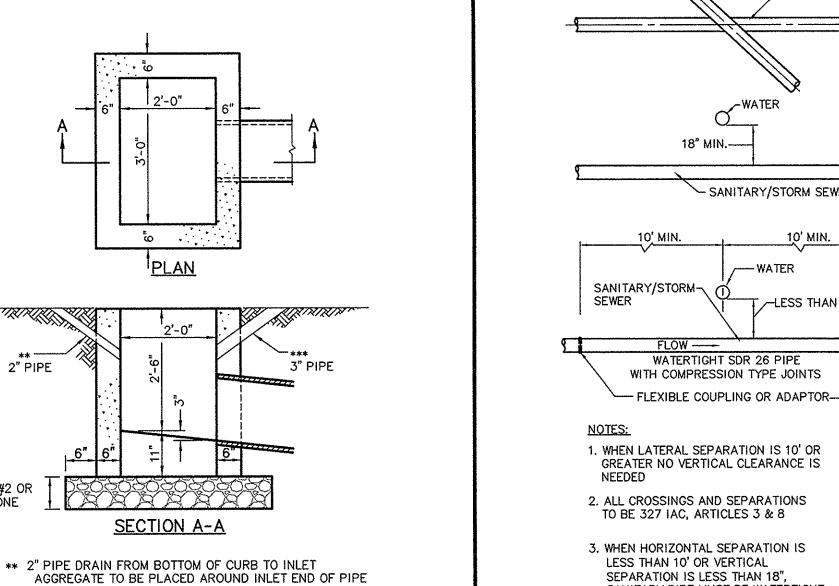


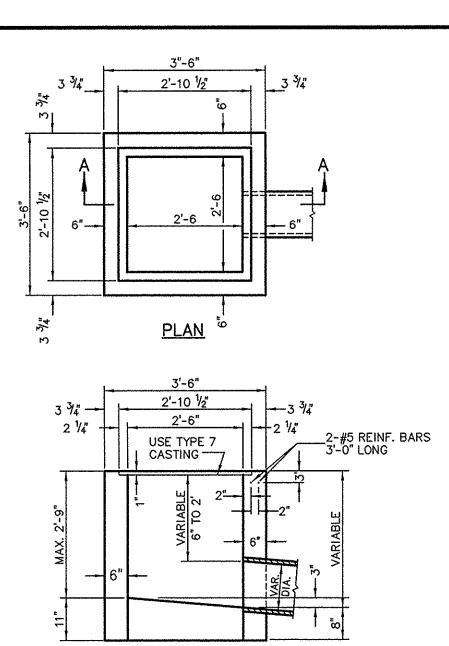
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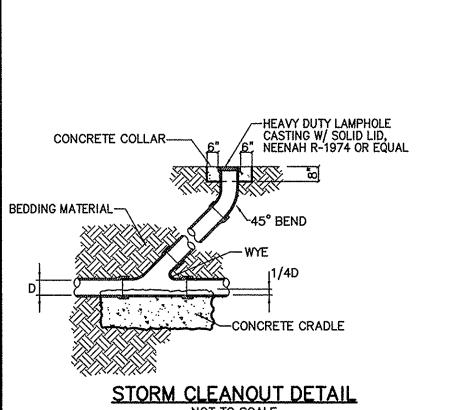
SECTION A-A

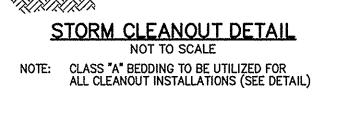
TYPE "E" INLET
NOT TO SCALE

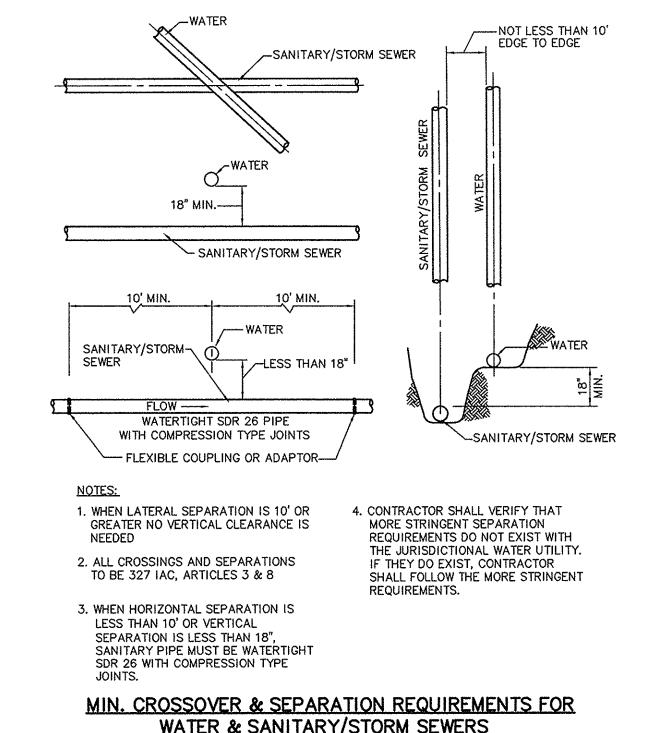
*** 3" MIN. DIA. PIPE TO BE KEPT OPEN FOR DRAINAGE OF SUBGRADE OR BASE UNTIL SURFACE IS PLACED.

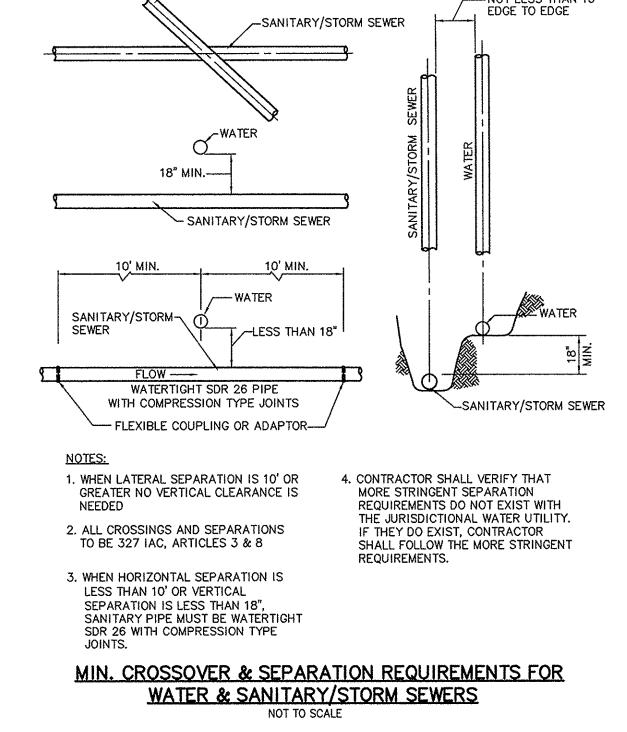
TYPE "J" INLET

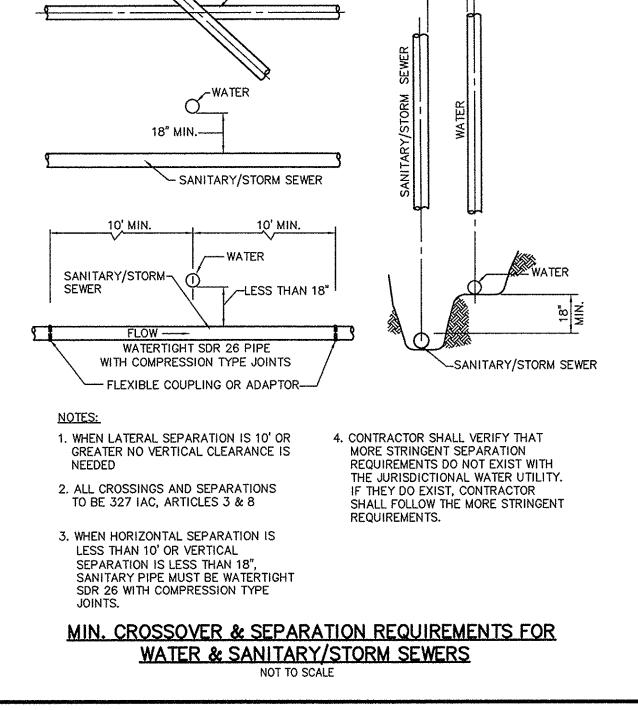
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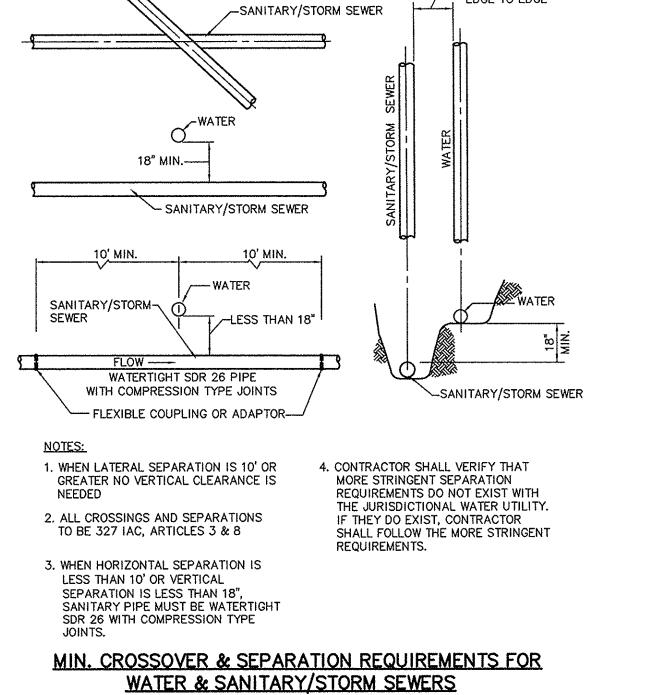


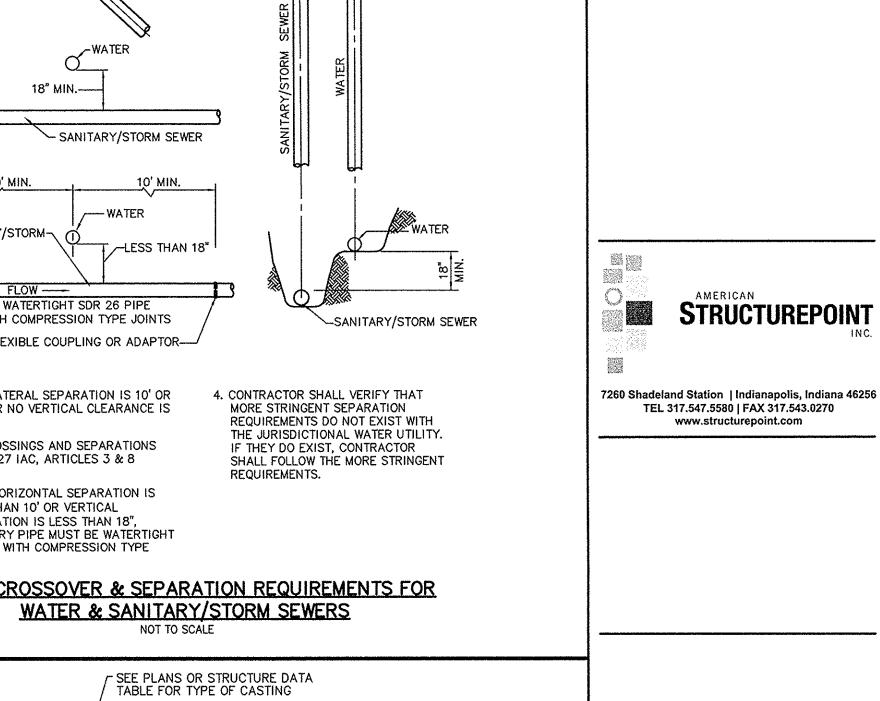


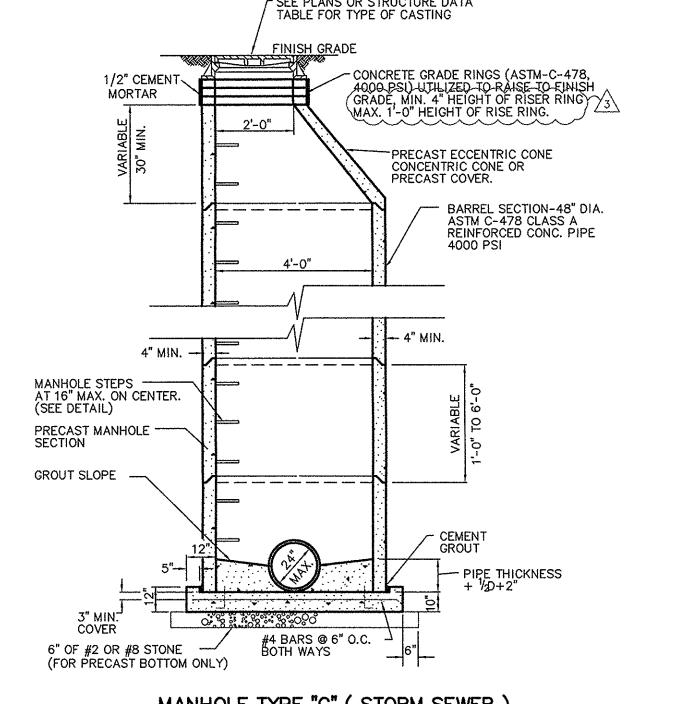










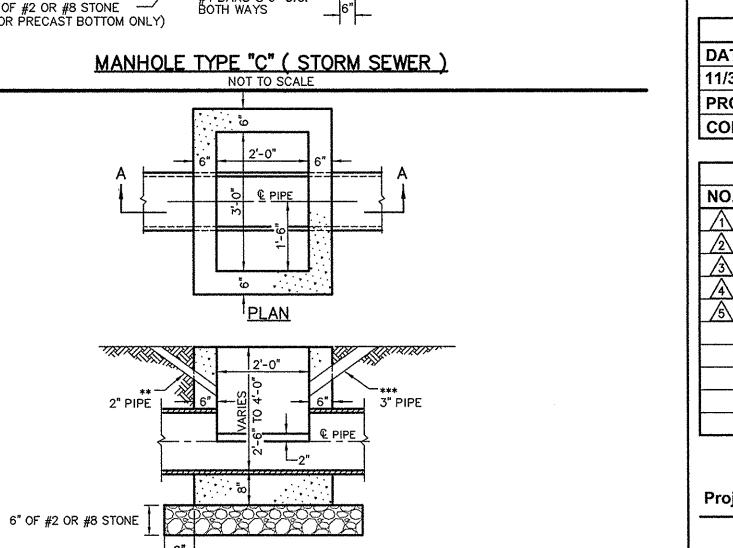


SECTION A-A

** 2" PIPE DRAIN FROM BOTTOM OF CURB TO INLET AGGREGATE TO BE PLACED AROUND INLET END OF PIPE

*** 3" MIN. DIA. PIPE TO BE KEPT OPEN FOR DRAINAGE OF SUBGRADE OR BASE UNTIL SURFACE IS PLACED.

TYPE "M" INLET
NOT TO SCALE



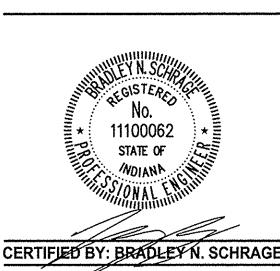
EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

INDY NE LODGING

ASSOCIATES, LLC

5701 PROGRESS ROAD INDIANAPOLIS, IN, 46241

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN 46060



	ISSUANCE INDEX
DAT	E:
11/3	0/2015
PRO	JECT PHASE:
CON	ISTRUCTION DOCUMENTS

REVISION SCHEDULE NO. DESCRIPTION DATE		
$\frac{10}{\Lambda}$	TAC & SWPPP COMMENTS	03/16/2016
$\frac{1}{2}$	ACCESS DRIVE	04/13/2016
3	TAC COMMENTS	05/04/2016
4	ISSUED FOR CONSTRUCTION	06/13/2016
/ 5	UTILITY COORDINATION	08/03/2016

2015.01923 Project Number

SITE DETAILS

C601

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2015.01923.CE.C600-C602.SD.dwg

- FRAME AND COVER INTERNAL CHIMNEY -SEAL (TYP.) TROWELABLE BUTYL RUBBER BACKPLASTER MATERIAL 1/4" MINIMUM THICKNESS WHEN DRY, 2" BELOW BOTTOM OF ADJUSTING RING TO & COVERING THE BASE OF THE CASTING PRECAST CONCRETE — ADJUSTING RINGS, 4" MIN.- 12" MAX. TROWELABLE BUTYL RUBBER — BACK PLASTER MATERIAL 1/4" MINIMUM THICKNESS WHEN DRY 6" ABOVE & BELOW EACH JOINT 12"-16" O-RING GASKETED JOINT-EVENLY SPACED BETWEEN ALL RISER AND CONE SECTIONS PER ASTM C 443, PLUS 1/2" EXTRUDABLE GASKET MATERIAL PER ASTM C 990 BREAK OUT TOP HALF OF— EXIST. PIPE AFTER MANHOLE IS CONSTRUCTED OR FORM NEAT CHANNEL AS SPEC. REINFORCING STEEL -PER ASTM C478 — BEDDING— MIN. 6" OF NO. 8 CRUSHED STONE OR NO. 8 FRACTURED FACE AGGREGATE

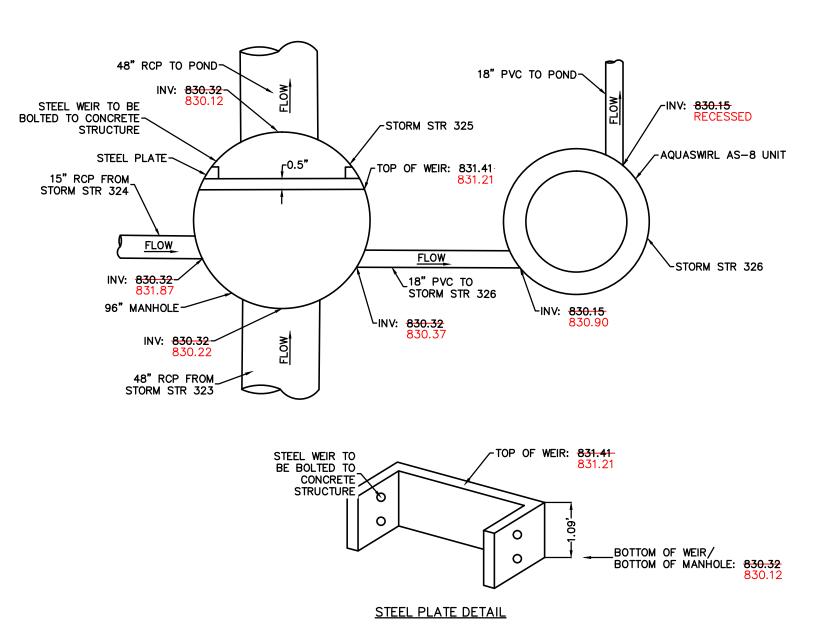
NOTES

1. DOGHOUSE OPENING MAY ONLY BE USED WHEN PLACING A NEW MANHOLE OVER AN EXISTING LINE; OTHERWISE, THE OPENING MUST BE CAST. SIZE, LOCATION AND ANGLE OF ENTRY SHOULD BE AS REQUIRED BY THE PLANS.

2. OPENINGS IN PRECAST UNITS ARE TO BE 4" MINIMUM TO 8" MAXIMUM LARGER THAN THE OUTSIDE DIAMETER OF THE PROPOSED PIPE.

POURED IN PLACE CONCRETE BASE

SANITARY SEWER DOGHOUSE MANHOLE NOT TO SCALE



WATER QUALITY DIVERSION STRUCTURE DETAIL - (STORM STR 326)
NOT TO SCALE

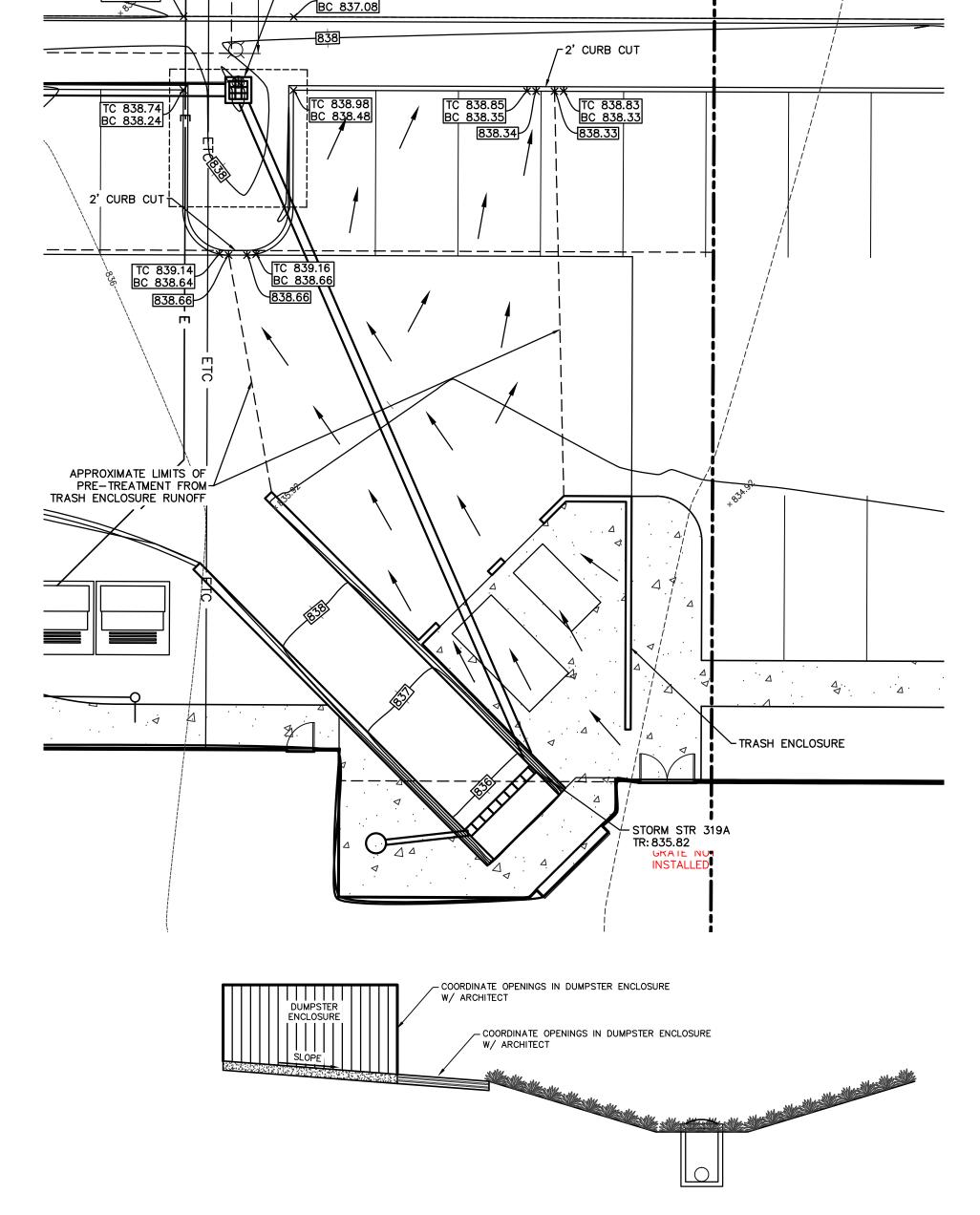
AS-BUILT

STORM SEWER AS-BUILT STATEMENT

As—Built information for storm sewer rims are based upon above ground evidence of the existing storm sewer system. The strike through data shown on the Storm Sewers are the proposed elevations for all the structures to be placed. Said information has been replaced by the as—built information per elevations collected in the field on December 14, 2016.

Jeffrey A. Douglass Registered Land Surveyor No. 29700000

> - STORM STR 319B TR: 837.25



DUMPSTER DRAINAGE DETAIL

NOT TO SCALE

INDY NE LODGING ASSOCIATES, LLC

5701 PROGRESS ROAD INDIANAPOLIS, IN, 46241



7260 Shadeland Station | Indianapolis, Indiana 46256 TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

EMBASSY SUITES
HOTEL, CONFERENCE
CENTER AND OUTLOTS

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN 46060

CERTIFIED BY: BRADLEY N. SCHRAGE

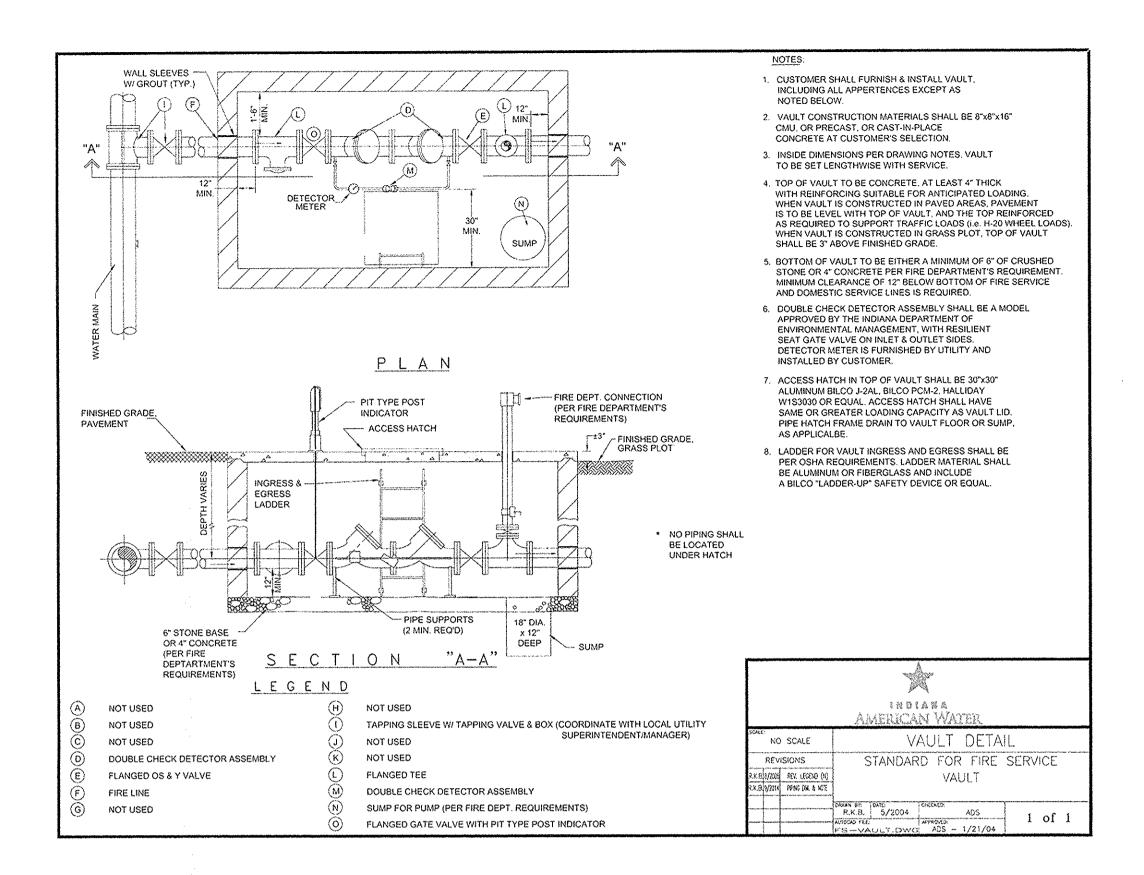
ISSUANCE INDEX
DATE:
11/30/2015
PROJECT PHASE:
CONSTRUCTION DOCUMENTS
•

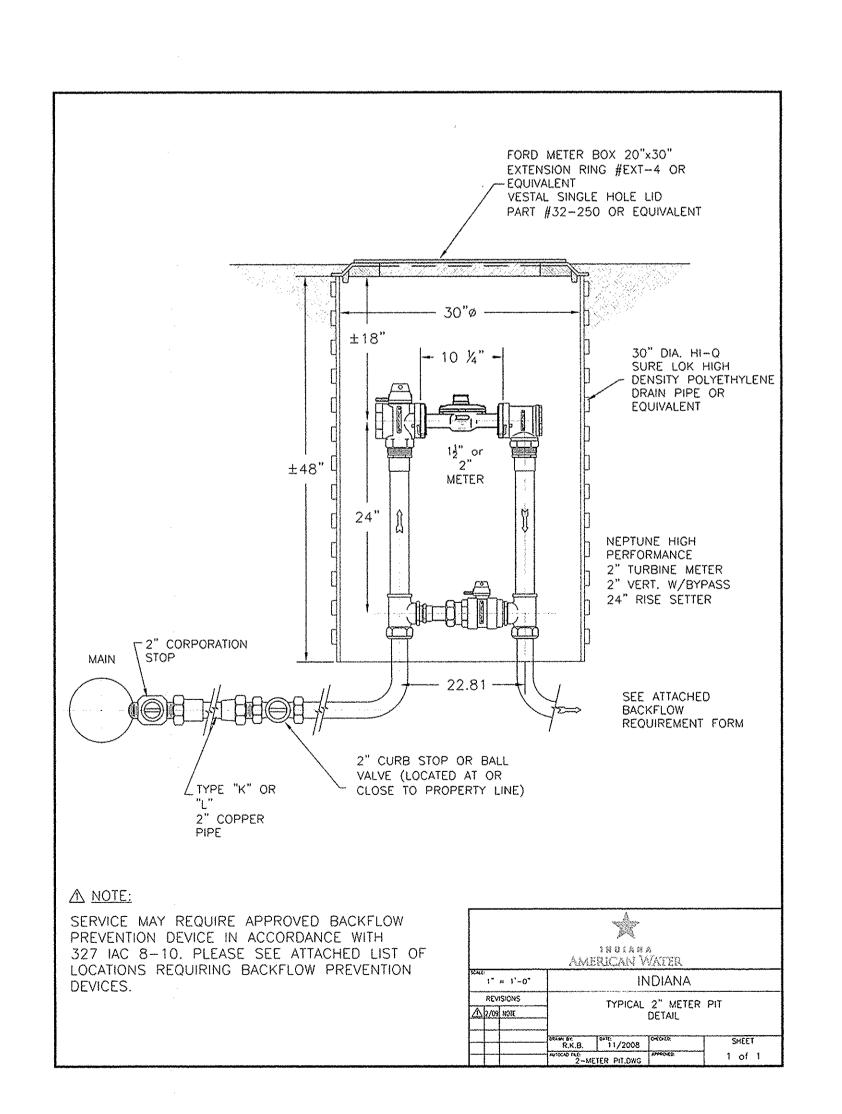
REVISION SCHEDULE			
NO.	DESCRIPTION	DATE	

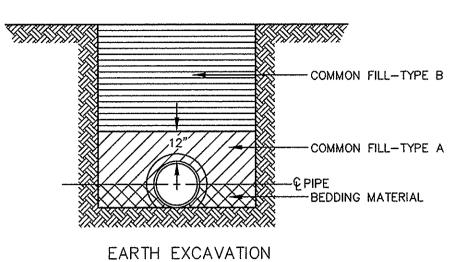
Project Number 2015.01923

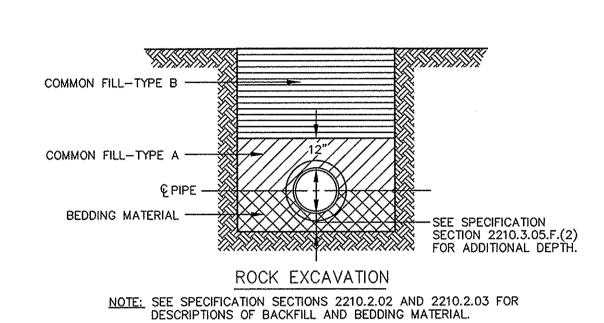
SITE DETAILS

C602

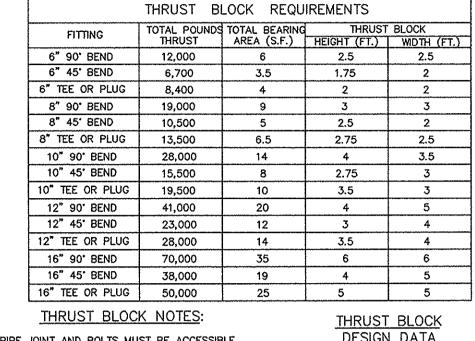








TRENCH BACKFILL MATERIALS 61-300-3 SK



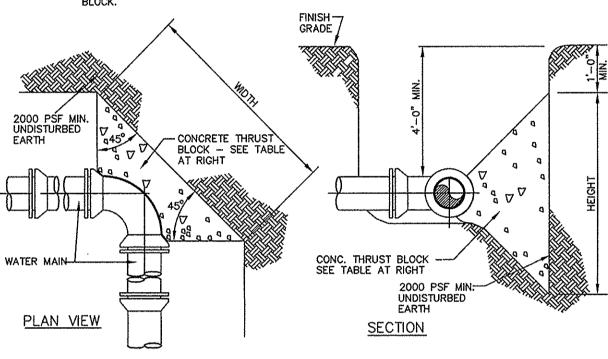
PIPE JOINT AND BOLTS MUST BE ACCESSIBLE. 2. CONCRETE SHALL BE CURED FOR MINIMUM OF 7 DAYS AND SHALL HAVE A COMPRESSION STRENGTH OF 3000 P.S.I. © 28 DAYS.

MAXIMUM OPERATING PRESSURE: 85 P.S.I. SURGE ALLOWANCE: 100 P.S.I.

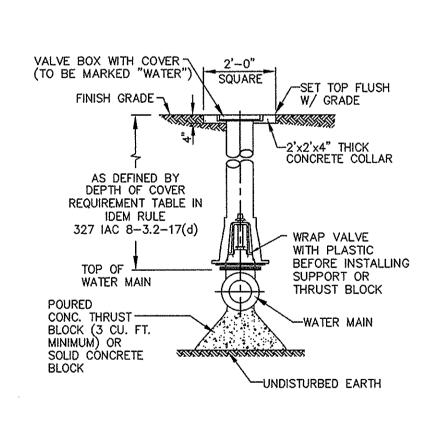
DESIGN DATA

THRUST BLOCKS SHALL BE POSITIONED TO COUNTERACT THRUST DESIGN PRESSURE: 185 P.S.I. THE DIRECTION OF THE RESULTANT THRUST FORCE. CONTRACTOR SHALL NOTIFY ENGINEER IF SOIL OF LESS BASED ON 2000 P.S.F. SOIL THAN 2000 P.S.F. IS ENCOUNTERED.

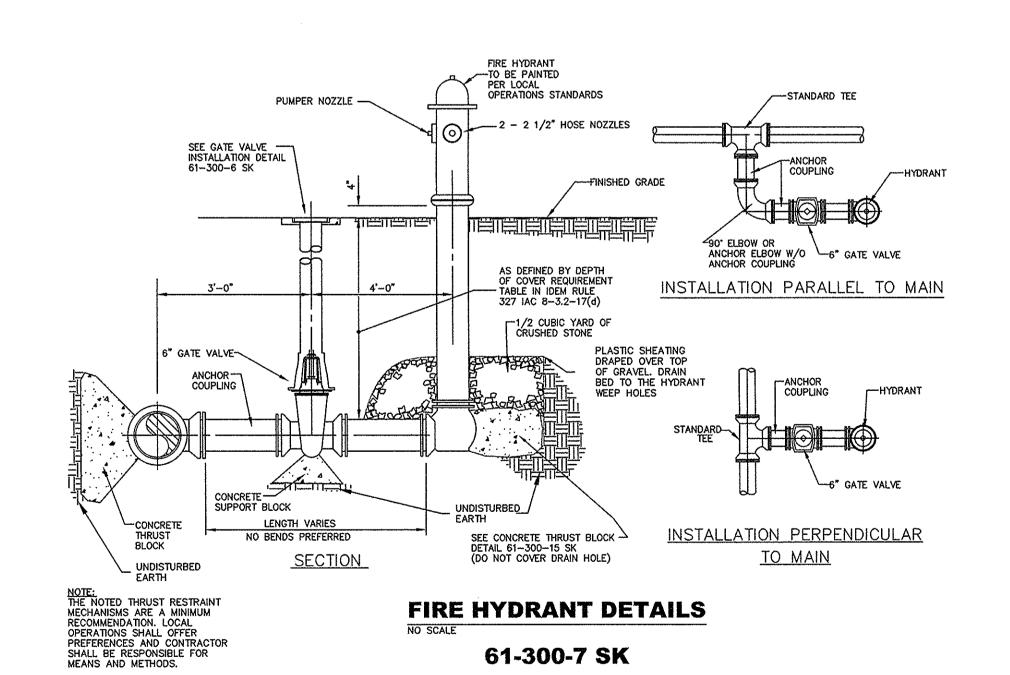
5. FIVE (5) MIL POLYETHYLENE PLASTIC SHALL BE USED TO COVER FITTINGS PRIOR TO POURING THE THRUST



THRUST BLOCK DETAILS 61-300-15 SK



GATE VALVE INSTALLATION DETAIL 61-300-6 SK



INDY NE LODGING ASSOCIATES, LLC

5701 PROGRESS ROAD INDIANAPOLIS, IN, 46241

STRUCTUREPOINT

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EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

OLIO ROAD AND TEGLER DRIVE, NOBLESVILLE, IN 46060



CERTIFIED BY: BRADLEY N. SCHRAGE

ISSUANCE INDEX DATE: 11/30/2015 **PROJECT PHASE:**

CONSTRUCTION DOCUMENTS

REVISION SCHEDULE NO. DESCRIPTION DATE TAC & SWPPP COMMENTS | 03/16/2016 ACCESS DRIVE 04/13/2016 TAC COMMENTS 05/04/2016 ISSUED FOR CONSTRUCTION 06/13/2016 UTILITY COORDINATION 08/03/2016

Project Number

INDIANA AMERICAN WATER

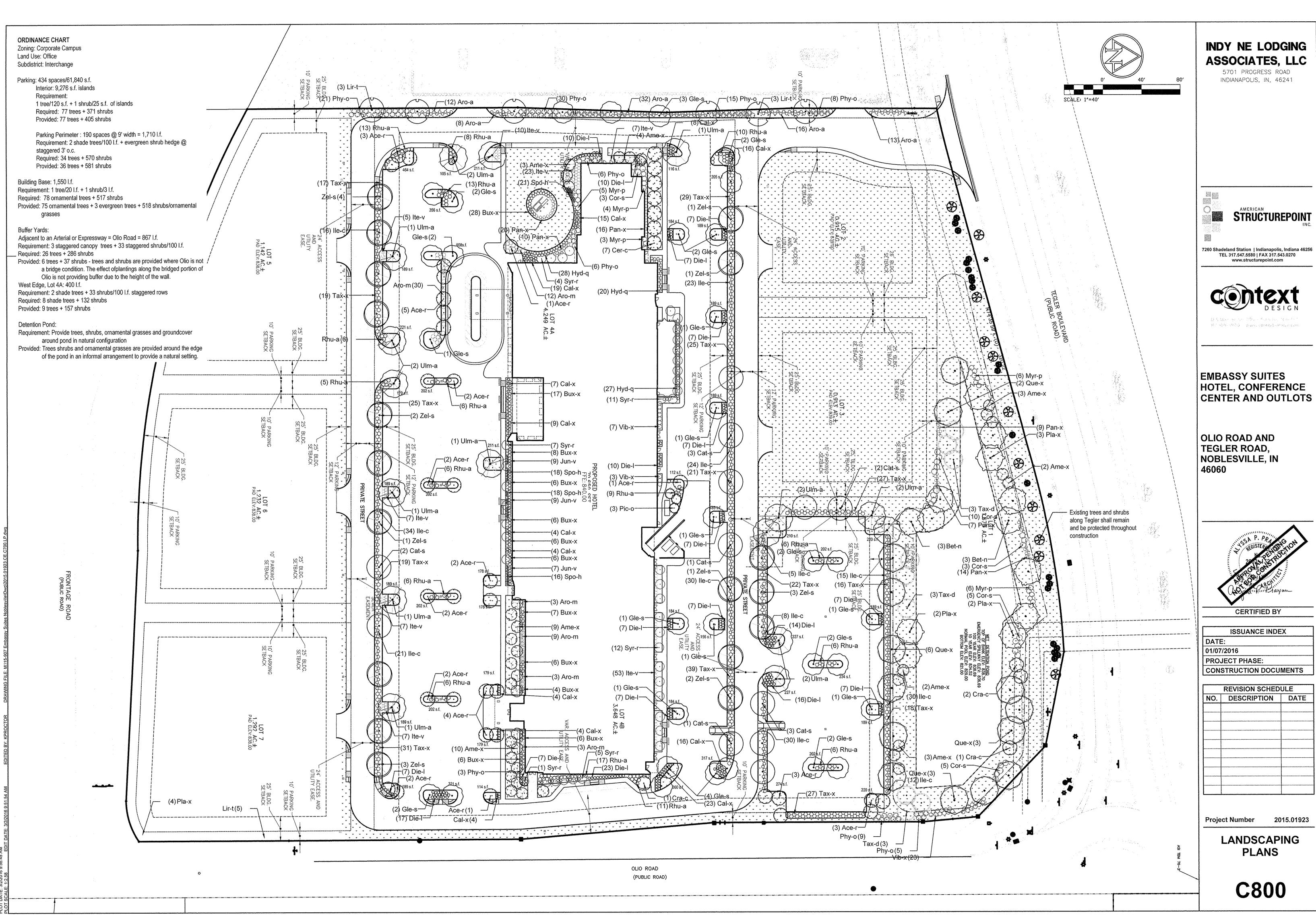
COMPANY DETAILS

C700

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2015.01923.CE.C700.INAW.dwg

2015.01923



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GENERAL LANDSCAPE & PLANTING NOTES

- 1. Plant material to be installed and maintained by a qualified and experienced landscape
- 2. All materials are subject to the approval of the Landscape Architect and Owner at any time. Landscape Architect to inspect all plant locations and plant bed conditions prior to installation. Stake all plant locations for review and approval by the Landscape Architect before planting. On-site adjustments may be required. Plants are to be freshly dug. Transporting of plants shall be done in a manner as to not destroy the natural shape, compromise the health, or alter the characteristics of plant materials.
- Rootballs shall meet or exceed size standards as set forth in 'American Standards for Nursery Stock'. MAIN LEADERS OF ALL TREES SHALL REMAIN INTACT. Remove from the site any plant material that turns brown or defoliates within five (5) days after planting. Replace immediately with approved, specified material.
- 4. Plant counts indicated on drawings are for Landscape Architect's use only. Contractor shall make own plant quantity takeoffs using drawings, specifications, and plant schedule requirements (i.e., spacing), unless otherwise directed by Landscape Architect. Contractor to verify bed measurements and install appropriate quantities as governed by plant spacing per schedule.
- 5. All plant beds shall receive 3" minimum of genuine shredded hardwood bark mulch (unless otherwise noted). Apply pre-emergent herbicide as directed by the manufacturer prior to installing mulch. Seed all areas disturbed by construction activities that are not otherwise noted to receive pavement, planting bed, or other treatment.
- The Contractor shall install and/or amend topsoil in all proposed bed areas to meet ASTM D5268 standards. Landscaper shall verify depth and quality of topsoil prior to plant installation. A minimum of 4" of topsoil is required for lawn areas; 12" for plant beds. Topsoil sources shall include the reuse of surface soil stockpiled on site, clean of roots, plants, sod, stones, clay lumps, and other extraneous or foreign materials larger than 1". Supplement with imported topsoil from off-site sources when quantities are insufficient. Do not obtain supplemental topsoil from agricultural land, bogs, or marshes. Inorganic amendments, organic amendments, and fertilizers shall be used to amend topsoil as needed for long-term plant health.
- . Verify all utility locations in the field prior to beginning work. Repair all damaged utilities to satisfaction of the Owner and Operating Authority at no additional cost.
- 8. Install all plant material in accordance with all local codes and ordinances. Coordinate with the Owner to obtain any required permits necessary to complete work. All workmanship and materials shall be guaranteed by the Contractor for a period of one (1) calendar year after Final Acceptance.
- 9. Maintain all plant material for a three (3) month period from date of Substantial Completion. Maintenance shall include pruning, cultivating, watering, weeding, fertilizing, restoring plant saucers, spraying for disease and insects, and replacing tree wrappings. Recommended long-term maintenance procedures shall be provided to the Owner before expiration of this
- 10. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 3 by 3 inches.Reestablish lawns that do not comply with requirements and continue maintenance until lawns are fully satisfactory to the Owner.
- 11. Mulch shall be shredded hardwood, dark brown in color. No aggregate mulch or wood mulch that has been dyed unnatural colors shall be permitted.

IRRIGATION NOTES:

- All landscaped areas of this site shall be irrigated using a permanent underground system,
- Irrigation plans shall be developed as part of a design/build effort by the contractor.
- All lawn areas shall receive irrigation using water efficient spray heads or rotors.
- All bed areas shall receive irrigation using an underground
- Sleeving for main lines, lateral lines, and control wiring shall be provided to all landscaped areas. The control wire shall be located in a separate sleeve that the piping.
- The irrigation system shall provide head to head coverage and shall be zoned in a manner to accommodate the existing water pressure and flow rate. Contractor shall verify the psi and gmp in the field prior to development the layout of the irrigation.

LANDSCAPE BED PREPARATION

Shredded Hardwood Organic Mulch Place level with adjacent finish grades.

Adjacent sidewalk or curb, typ.

Topsoil, to include a min. of 5% organic matter

Remove all stones 1" & larger and

Note: All perennial beds shall be planted using triangular planting scheme.

Refer to Planting Schedule for On-Center

Compacted subgrade

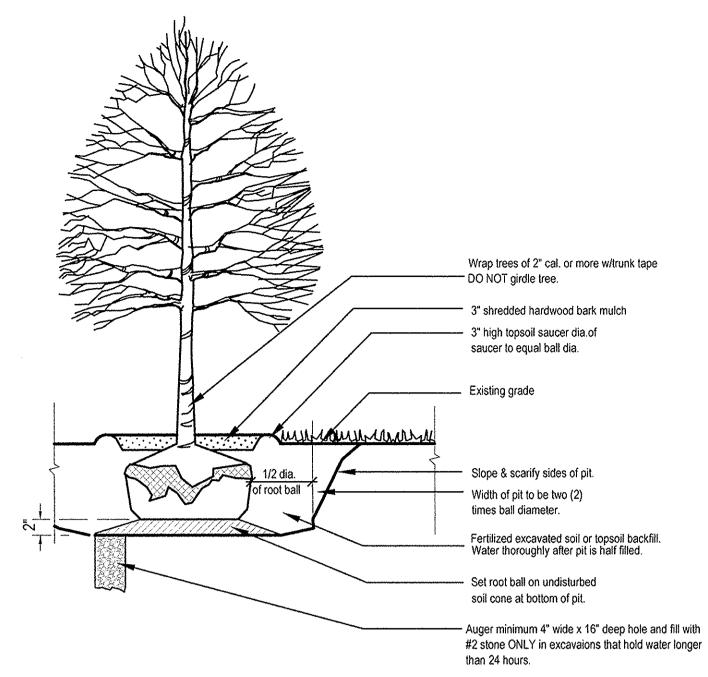
planting dimension.

Compacted subgrade

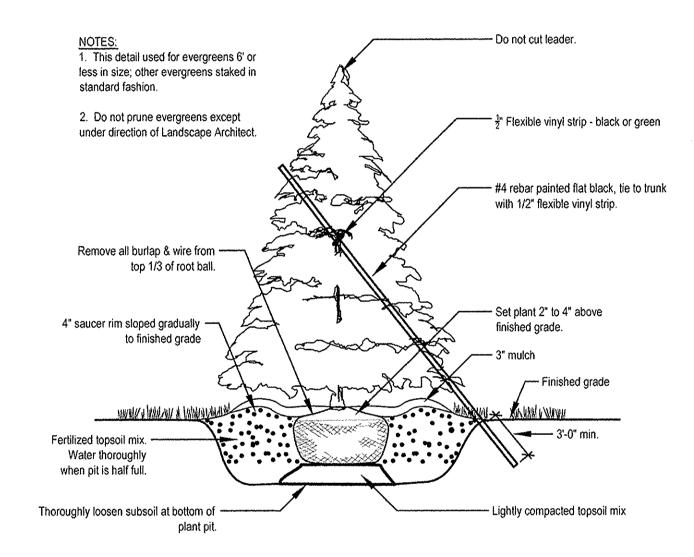
3" shredded hardwood bark mulch

--- 12" prepared soil; see specifications

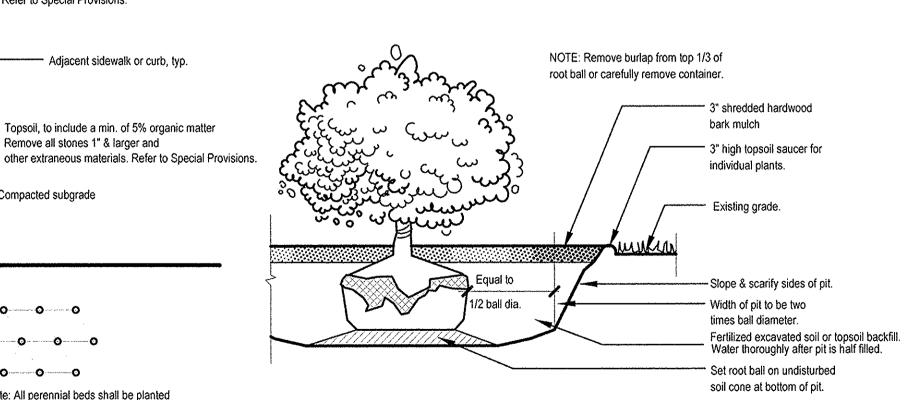
Refer to Special Provisions.



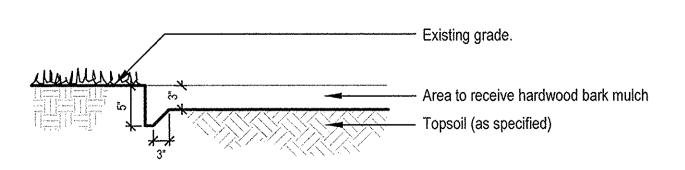
TREE PLANTING Not to Scale



EVERGREEN TREE PLANTING Not to Scale



SHRUB PLANTING Not to Scale



SPADE EDGE

INDY NE LODGING

ASSOCIATES, LLC

5701 PROGRESS ROAD

INDIANAPOLIS, IN, 46241

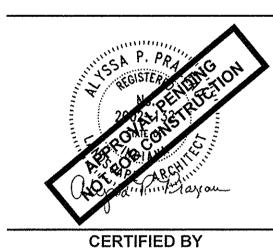
STRUCTUREPOINT

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EMBASSY SUITES HOTEL, CONFERENCE CENTER AND OUTLOTS

OLIO ROAD AND TEGLER ROAD, NOBLESVILLE, IN 46060



ISSUANCE INDEX DATE: 01/07/2016 PROJECT PHASE: CONSTRUCTION DOCUMENTS

REVISION SCHEDULE NO. DESCRIPTION DATE

2015.01923 **Project Number**

> **LANDSCAPING DETAILS**

> > C801

PERENNIAL PLANTING

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Loading Zone

39'-2"

Embassy Suites Lot 4B

_ 5'-0"

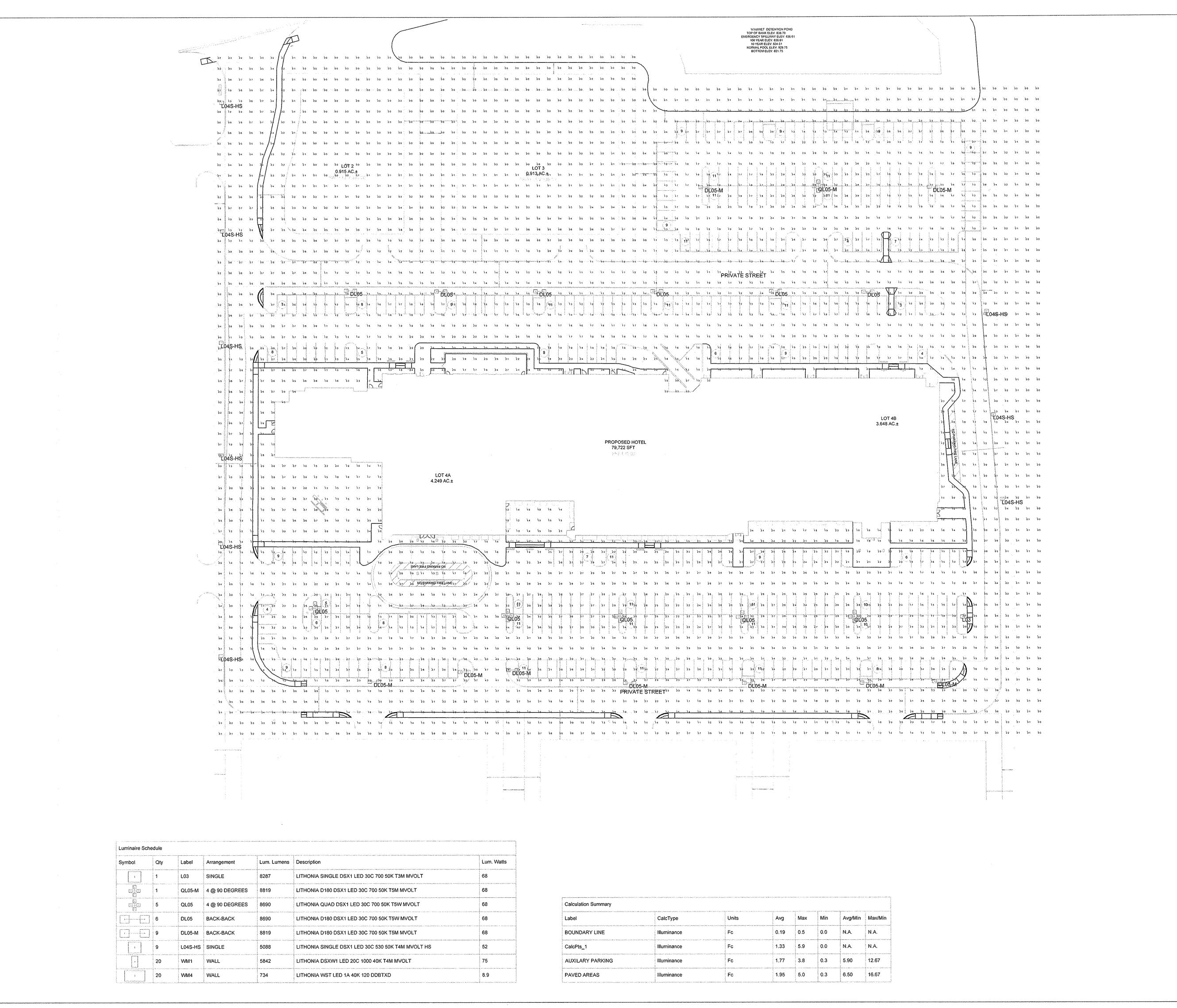
EAST EDGE CROSS SECTION

Scale: 1" = 10'-0"

11'-5"

26'-6"

Olio Road ROW



General Notes

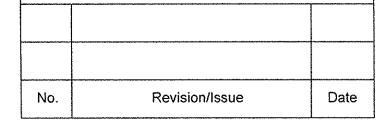
GENERAL PLAN NOTES:

POLE MH:
 POLE MOUNT: 25'-0" MAX
 20'-0" POLE, 3'-0" BASE

LIGHT LOSS FACTOR:
 LED: 0.92

FOOTCANDLES CALCULATED: AT GRADE

FOR PRICING REQUESTS CONTACT JANINE BURKHART: 317-698-4175

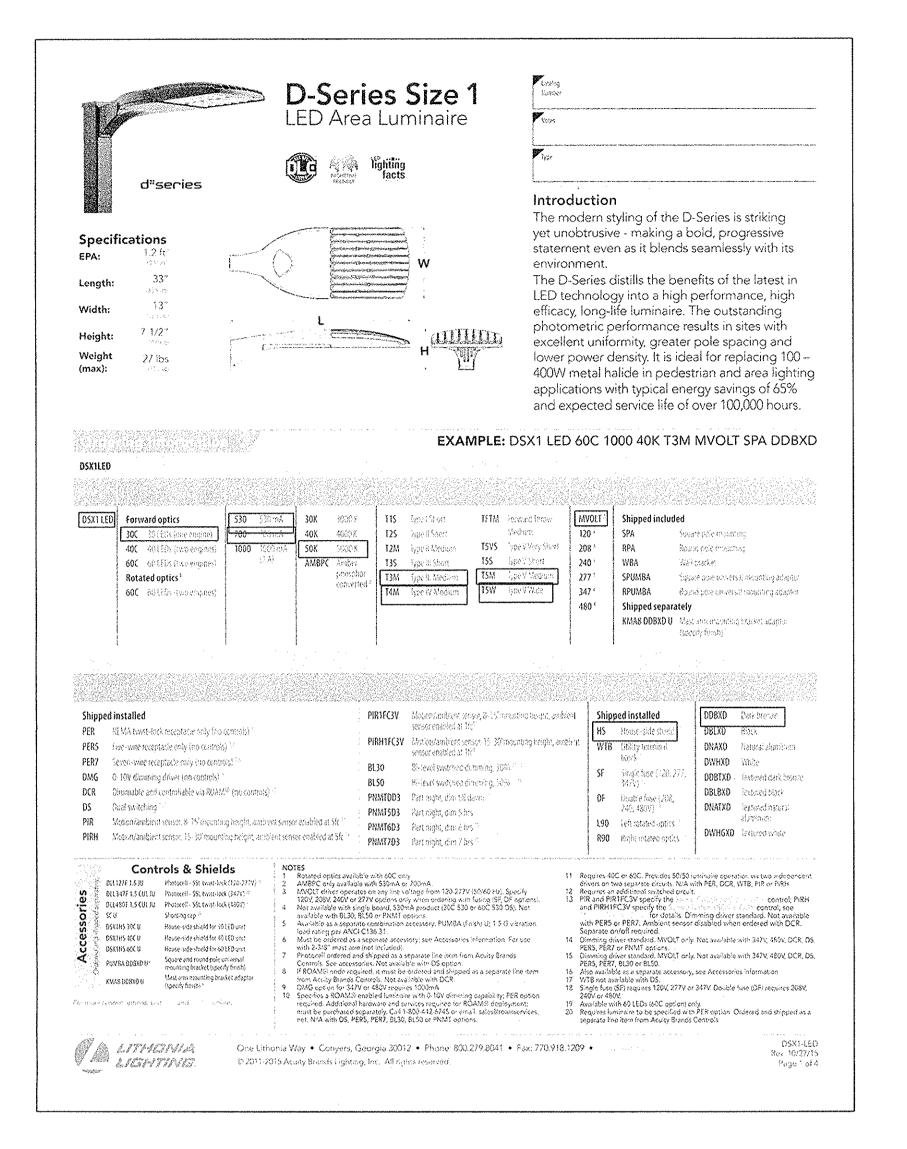


Firm Name and Address

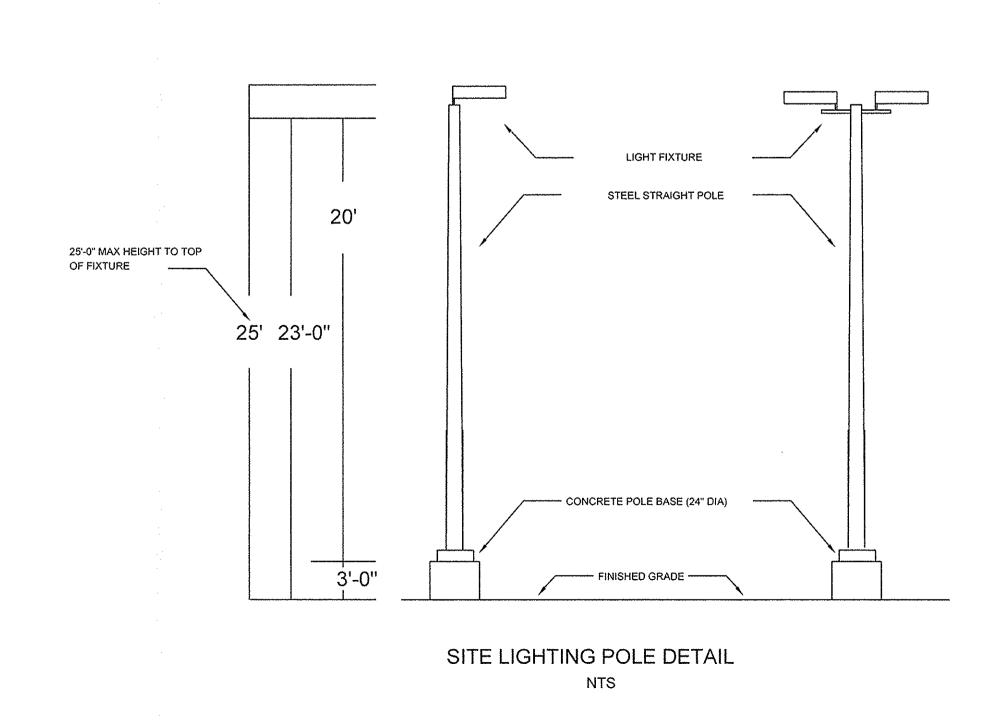
Project Name and Address

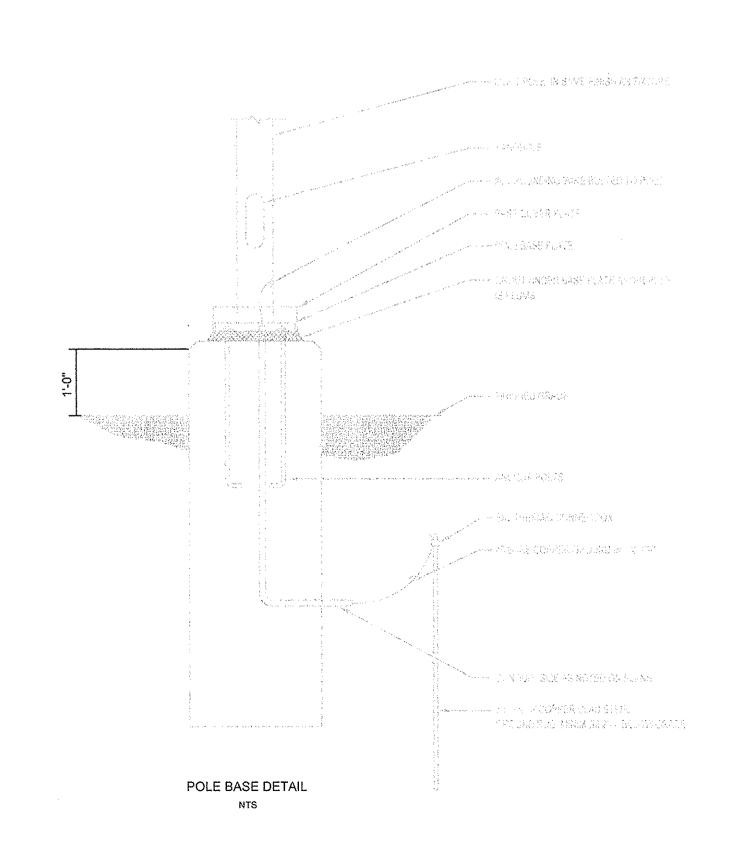
EMBASSY SUITES -OLIO RD r6

Drawn By KLS	Sheet	
KL3	E101	
Date FIE 1004.0	EIVI	
5/5/2016	Drawing #	
Scale 1/16"=1'-0"	LS-15-3023-R6	



TYPE A3, A3-HS, A-FT, A5, D5





General Notes GENERAL PLAN NOTES: POLE MH: •• POLE MOUNT: 25'-0" MAX •• 20'-0" POLE, 3'-0" BASE FOOTCANDLES CALCULATED: AT GRADE LIGHT LOSS FACTOR: •• LED: 0.92 FOR PRICING REQUESTS **CONTACT JANINE** BURKHART: 317-698-4175 Firm Name and Address Project Name and Address

EMBASSY SUITES -OLIO RD

Drawn By KLS Date 5/5/2016 Drawing # 1/16"=1'-0" LS-15-3023-R6

Revision/Issue