### CITY OF SHELBYVILLE

Adam M Rude Director



Allan Henderson Deputy Director

### PLAN COMMISSION

MEETING DATE: 9/28/2020

| Case Number & Name: PC 2020-09; Zaxby's; Site Development Plan Petitioner's Name: Barred Rock, Inc. d.b.a. Zaxby's Owner's Name: Indiana Land Trust Petitioner's Jeff Furlin  |                    |  |  |
|---|--------------------|--|--|
| Owner's Name: Indiana Land Trust  Petitioner's Leff Furlin  |                    |  |  |
| Petitioner's Leff Furlin  |                    |  |  |
| l lett Furlin   | Indiana Land Trust |  |  |
| Representative:   | Jeff Furlin        |  |  |
| Address of Property: 1792 North Riley Highway   |                    |  |  |
| Subject Property Zoning Classification:  Business Highway   |                    |  |  |
| Comprehensive Future Land use:  Gateway Mixed-Use   |                    |  |  |
| North East South West   |                    |  |  |
| Surrounding Properties' Zoning Classifications:  Business Highway  Business Highway  Business Highway  Single Fa  | •                  |  |  |
| Surrounding Properties' Comprehensive Future Land Use Gateway Mixed-Use Gateway Mixed-Use Gateway Mixed-Use Gateway Mixed-Use Gateway Mixed-Use   | xed-Use            |  |  |
| The parcel has been a mix of retail throughout the years. In the recent past it operated Shell Gas Station, but has been vacant for 10+ years. The site has sat vacant from the now. The existing building will be demolished for the next Zaxby's. |                    |  |  |
| Vicinity Map:   |                    |  |  |
|   |                    |  |  |

- 1. This petition is to construct a Zaxby's restuarant 1792 North Riley Highway. The proposal includes a 3,852 sq. ft. store with 70 seat capacity. The project is redeveloping .78 acres of a 1.67 acre site that has been vacant for 10+ years.
- 2. The Zoning Ordinance (Section 9.05 (F) (5)) requires the Plan Commission make Findings of Fact that the Site Development Plan:

### a. Is consistent with the City of Shelbyville Comprehensive Plan;

The planning staff has determined the subject petition is consistent with the goals of the Comprehensive Plan. A focus of the Comprehensive Plan is to increase development around the interstate interchanges. The site for Zaxby's is located south of the Interstate 74 and State Road 9 interchange.

### b. Meets the Technical Review Committee's expectations for best practices and quality design;

The Technical Review Committee reviewed the site development plan against their applicable standards and are satisfied with the plans.

### c. Satisfies the applicable requirements of Article 2: Zoning Districts;

The planning staff has determined the subject petition is consistent with the business highway zoning district. The business highway is intended to provide areas for business that either service travelers or requires immediate access to high-volume streets for the delivery of goods and services. This district should be integrated into the community at its entrances and in centers along major transportation routes.

### d. Satisfies the applicable requirements of Article 5: Development Standards;

All standards of Article 5 of the Unified Development Ordinance appear to be met, except:

### Commercial Standards - UDO 5.09

Places where sidewalks cross drive aisles, access roads, or driveways, the crossing shall be a paving material different from that of the vehicle surface to clearly distinguish them as a pedestrian route. The crossing from North Riley Highway through the parking lot does not appear to include a material change. This can be pavers, bricks, or stamped concrete that replicates the appearance of bricks or pavers.

### Sign Standards – UDO 5.58

The Unified Development Ordinance requires pole and pylon signs to be permitted via special exception by the Board of Zoning Appeals. Zaxby's intends to apply for a special exception use and development standards variances for the pole sign located on site.

Note: Prior to the administrative issuance of a sign permit, detailed elevations to determine square footage and dimensions of facades ensuring compliance with standards will be required.

### e. Satisfies the applicable requirements of Article 6: Design Standards

Article 6: Design Standards provides the standards for all subdivisions and generally apply to the construction of residential planned unit developments with public improvements. Article 6: Design Standards do not apply to this project.

**f.** Satisfies any other applicable provisions of the Unified Development Ordinance. All other applicable provisions of the Unified Development Ordinance are being satisfied by the submitted civil plans.

### **STAFF RECOMMENDATION: APPROVAL W/ CONDITIONS:**

1. Provide a material change where the sidewalk crosses the drive aisle on the west side of the building.

### Site Development Plan: PC 2020-09; Zaxby's; Site Development Plan

### Findings of Fact by the Shelbyville Plan Commission

### Staff Prepared

|       | Motion:  |
|-------|--|
|       | (I) would like to make a motion to approve the site development plan as presented to this body, with the conditions outlined in the planning staff's report, pursuant to the planning staff's report and Findings of Fact. |
|       | in the planning start 3 report, pursuant to the planning start 3 report and 1 munigs of 1 act.   |
| 1.    | The site development plan is consistent with the <i>City of Shelbyville Comprehensive Plan</i> as outlined in the planning staff's report.   |
|       | The site development plan is <b>not</b> consistent with the <i>City of Shelbyville Comprehensive Plan</i> , as outlined in the planning staff's report.  |
| 2.    | The site development plan meets the Technical Review Committee's expectations for best practices and quality design, a outlined in the planning staff's report, as outlined in the planning staff's report.                |
|       | The site development plan does not meet the Technical Review Committee's expectations for best practices and qualit  |
|       | design, as outlined in the planning staff's report, as outlined in the planning staff's report   |
| 3.    | The site development plan satisfies the applicable requirements of Article 2: Zoning Districts, as outlined in the plannin   |
|       | staff's report.  |
|       | The site development plan <b>does not</b> satisfy the applicable requirements of Article 2:.Zoning Districts, as outlined in the   |
| 1     | planning staff's report.   |
| 4.    | The site development plan satisfies the applicable requirements of Article 5: Development Standards, as outlined in the  |
|       | planning staff's report.  The site development plan does not esticfy the applicable requirements of Article 5. Development Standards as outlined in  |
|       | The site development plan <b>does not</b> satisfy the applicable requirements of Article 5:.Development Standards, as outlined in the planning staff's report.   |
| 5.    | The site development plan satisfies the applicable requirements of Article 6: <i>Design Standards</i> , as outlined in the planning  |
| J.    | staff's report.  |
|       | The site development plan <b>does not</b> satisfy the applicable requirements of Article 6: Design Standards, as outlined by the planning staff's report.  |
| 6.    | This site development plan satisfies all other applicable provision of the <i>Unified Development Ordinance</i> , as outlined by the planning staff's report.  |
|       | The site development plan <b>does not</b> satisfy all other applicable provision of the Unified Development Ordinance, a outlined in the planning staff's report.  |
| Addi  | tional Conditions Imposed by the Shelbyville Plan Commission:  |
| 1     | 1.   |
|       |  |
| 2     | 2.   |
|       |  |
| 3     | 3.   |
| Shell | byville Plan Commission  |
|       |  |
| By: _ | Attest:  |
|       | Chairnerson / Presiding Officer Adam M. Rude. Secretary  |



SITE DEVELOPMENT PLAN APPLICATION
Shelbyville Planning & Building Department
44 West Washington Street
Shelbyville, IN 46176
P: 317.392.5102

| For Office Use Only: |        |
|----------------------|--------|
| Case #: PC           |        |
| Hearing Date:        | W      |
| Fees Paid: \$        |        |
| Final Decision:      |        |
| Approved             | Denied |

|   | Limit Decision.   |
|---|---|
|   | Approved Denied   |
| 1.  |   |
| Applicant Name: Jeff Furlin (Barred Rock, Inc. d/b/a/ Zaxby's)                                    | Property Owners Information (if different than Applicant)                             |
| Name: Jeff Furlin (Barred Hock, Inc. d/b/a/ Zaxby's) Address: 10142 Brooks School Road, Suite 196 | Name: Gallus Shelbyville, LLC   |
| Fishers Indiana 46037   | Address: 10142 Brooks School Road, Suite 196 Fishers, IN 46040                        |
| Phone Number: (317) 509-0627  | Phone Number: 317-509-0627  |
| Fax Number:   | Fax Number:   |
| Email: furlinjl@aol.com   | Email: furlinjl@aol.com   |
|   |   |
| 2.  |   |
| Applicant's Attorney/Representative   | Project Engineer  |
| Name: Tyler Comstock  | Name: Tyler Comstock  |
| Address: 9025 River Road, Suite 200   | Address: 9025 River Road, Suite 200   |
| Indianapolis, Indiana 46240   | Indianapolis, Indiana 46240   |
| Phone Number: (317) 547-5580  | Phone Number: (317) 547-5580  |
| Fax Number:   | Fax Number:   |
| Email: _tcomstock@structurepoint.com  | Email: tcomstock@structurepoint.com   |
| 3. Project Information:  General Location of Property (and address is applicable): Near the       | Existing Use of Property: Abandoned Gas Station Proposed Use: Commercial food service |
|   | , toposed ode. <u>Commercial 1000 Service</u>   |
| 4. Attachments  |   |
| Affidavit and Consent of Property Owner (if applicable)   | Lighting Plan   |
| Proof of Ownership (copy of deed, recent property card)   | Landscaping Plan  |
| X Letter of Intent  | ☑ Drainage Plan and Report  |
| Civil Plans as prescribed in UDO 9.05   | Dimensioned Site Plan   |
|   |   |
| Vicinity Map  | X Filling Fee   |
|   |   |
|   |   |
| The undersigned states the above information is true and  | correct as e/he is informed and heliams   |
| - Included states the above information is true and   | correct as sine is informed and believes.   |
| Applicant: (/ / )   | Date: 1/3/2020  |
| The   |   |
|   |   |
| TPA   |   |
| State of 10   | 1 1   |
| County of Namulton) SS: Subscribed and sworp to before me thi                                     | 31 day of 111 2020  |
| Subscribes and sworm to before the un   | s   |
|   | 1 Corey A Johnson   |
| Notary  | Public Printed  |
|   | _   |
| Residing in Han, Ho Cou   | nty. My Commission Expires: 3-13-2027   |
| toologing in  | my Commission Expired.  |
|   | COREY A JOHNSON   |
|   | Notary Public - Seal  |
|   | Hamilton County - State of Indiana  |
|   | Commission Number NP0719154   |

### AFFIDAVIT & CONSENT OF PROPERTY OWNER

### APPLICATION TO THE SHELBYVILLE PLAN COMMISSION

| STATE OF Florida ) COUNTY OF Hillsborough ) SS:   |               |
|---|---------------|
| Timothy J. Healey, Authorized Agent I, Indiana Land Trust#120728  (Name of property owner)  FOLLOWING:  | HE            |
| That I am the owner of real estate located at 1792 N Riley Highway Shelbyville, Indiana 46 (Address of subject property)                                  | 176 ;         |
| That I have read and examined the Application made to the Shelbyville Plan Commission by:   |               |
| <ol> <li>That I have no objections to, and consent to the request(s) described in the Application made to the<br/>Shelbyville Plan Commission.</li> </ol> | ne            |
| Indiana Land Trust#120728/Timothy J. Healey, Aut  | horized Agent |
| Owner's Name (Please Print)   | /             |
| De A  |               |
| Owner's Signature   |               |
| Subscribed and sworn to before me this 31 day of Tuly, 2020   |               |
| Michelle Monson Ash Notary Public Printed  Notary Public Printed  | worth         |
| Residing in Hills boroughny My Commission expires 4/8/2027  | -             |
| MICHELLE MONSON ASHWORT MY COMMISSION # GG 204763 EXPIRES: April 8, 2022  |               |



VISIT US AT ZAXBYSFRANCHISING.COM





# EATING ZAXBY'S IS GOOD OWNING IT IS EVEN BETTER.









### **QUALIFICATIONS**

Collective net worth of at least \$1,000,000, with liquid assets greater than \$500,000.

### **DEMOGRAPHICS**

**MEDIAN AGE:** 22 - 45

MIN. AVG. HOUSEHOLD INCOME: \$45,000

MIN. TRAFFIC COUNTS: 20,000 ADT ON PRIMARY ARTERY:

(returning home side preferred) **SEATING INSIDE:** 50 – 90

**BUILDING FOOTPRINT:** 2,400-3,900 sq. ft.

SITE SIZE: .80 to 1.25 acres

TRADE AREA: 30,000 draw minimum
PREFERRED SITES: Corner lots,

shopping center pads, and interstate locations.

**ZONING:** Freestanding restaurant with

drive-thru window. Must allow adequate signage.

### **FEES**

INITIAL FRANCHISE FEE: \$35,000 ROYALTY: 6% of gross sales per week

NATIONAL AD FUND: 1% of gross sales per week

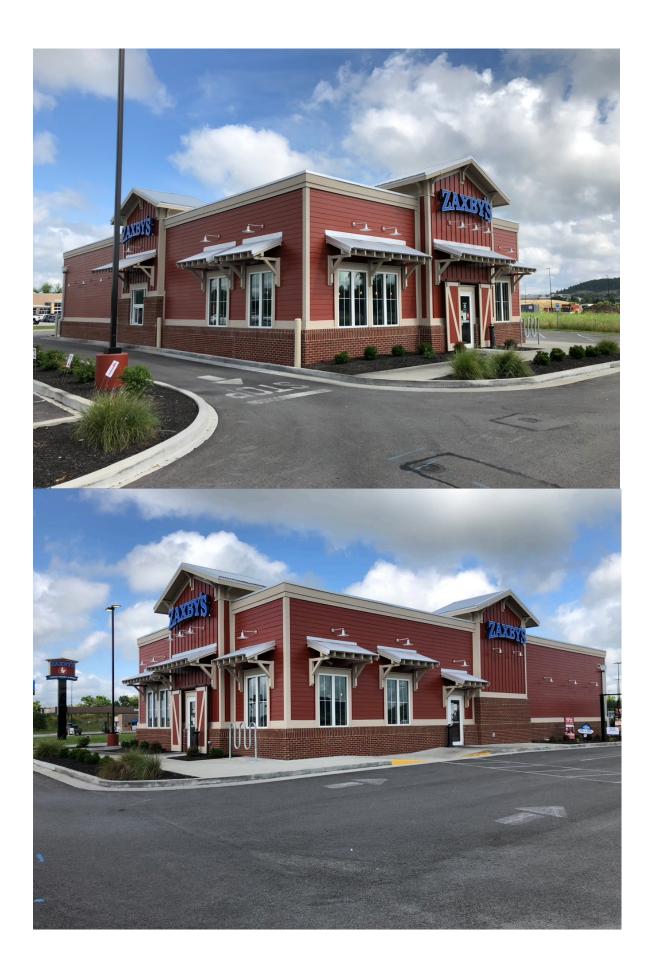
CO-OP MARKETING CONTRIBUTION:

1.5%-3.5% of gross sales per week (as determined by co-op)

### **SUPPORT**

- Innovative menu design and product development
- Training programs aligned with the best practices in the learning industry
- Dedicated field operations and business consultant staff
- · Site selection, construction and pre-opening assistance
- Award winning advertising campaigns, local store marketing tools and community outreach programs

| INCEPTION | Franchising since 1994   |  |
|-----------|--|--|
| SPECIALTY | <ul><li> Quick casual dining</li><li> Hand battered chicken fingers</li><li> Spicy Buffalo wings</li></ul> | Eight unique sauces     Delectable sandwiches     Fresh salads |
| STATES    | AL, AR, FL, GA, IN, KS, KY, LA, MD<br>OK, SC, TN, TX, VA, UT, WV   | O, MO, MS, NC, OH,   |
| DECOR     | Eclectic casual atmosphere   |  |



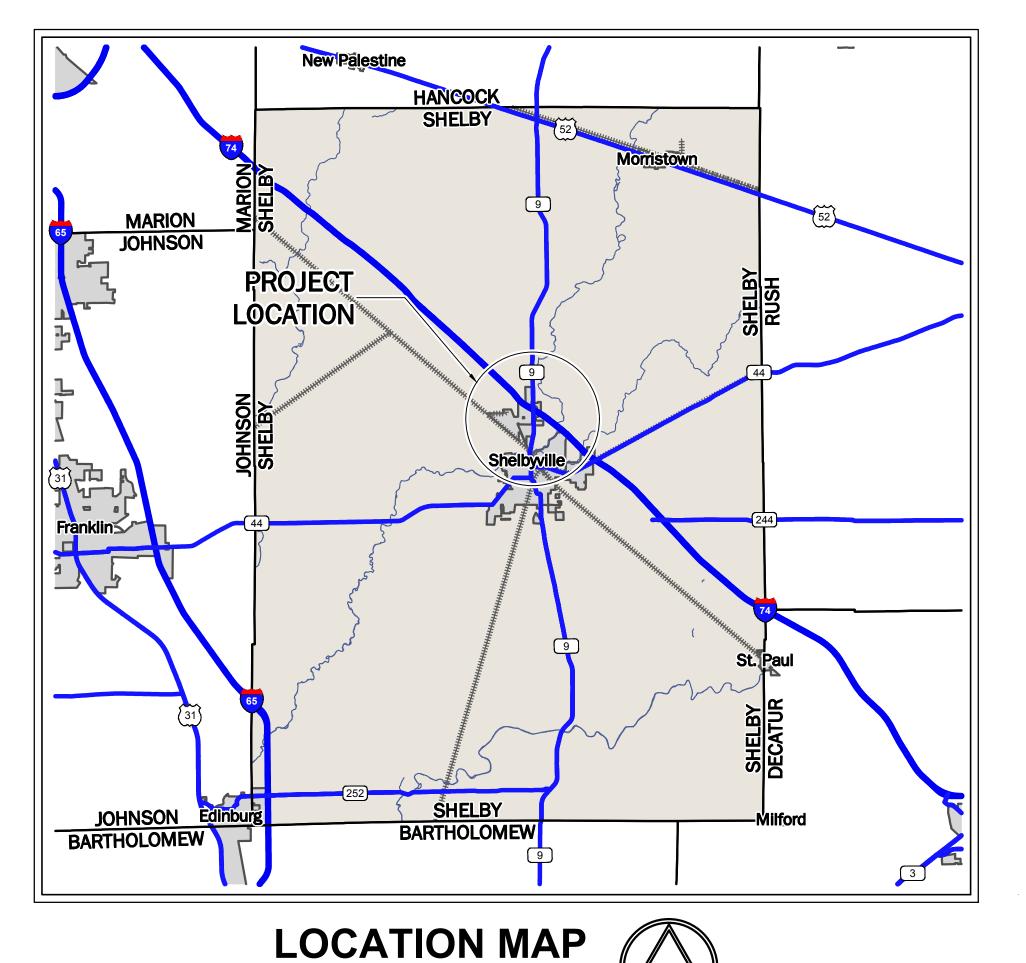




# CONSTRUCTION PLANS

**FOR** 

## **ZAXBY'S** 1792 N. RILEY HWY SHELBYVILLE, IN 46176



NOT TO SCALE

National Flood Hazard Layer FIRMette



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|                                       | •         |

Barred Rock, Inc. d/b/a Zaxby's **Circle City Rentals, LLC** d/b/a Aaron's

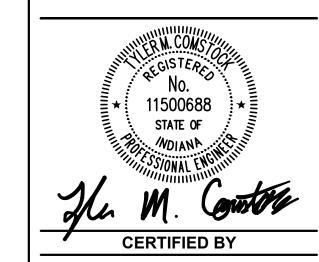
10142 Brooks School Road, Suite 196 Fishers, Indiana 46037 Contact: Jeff Furlin (317) 509-0627 furlinjl@aol.com



TEL 317.547.5580 | FAX 317.543.0270 www.structurepoint.com

Zaxby's

1792 N. Riley Hwy Shelbyville, IN 46176



| ISSUANCE INDEX         |
|------------------------|
| DATE:                  |
| 09/16/2020             |
| PROJECT PHASE:         |
| CONSTRUCTION DOCUMENTS |

| REVISION SCHEDULE |             |    |          |
|-------------------|-------------|----|----------|
| NO.               | DESCRIPTION | NC | DATE     |
|                   |             |    |          |
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|                   |             |    | ·        |
|                   |             |    |          |
| Proje             | ect Number  | 20 | 20.01229 |

TITLE SHEET



**SOILS MAP** 

Gravel Pits Nineveh loam, 0 to 2 percent slopes

**FEMA MAP** NOT TO SCALE

**VICINITY MAP** NOT TO SCALE

**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 EXISTS.
- SEE SHEET COO2 GENERAL NOTES FOR MORE

|          |           | UTILITY CON            |               |                 |                         |
|----------|-----------|------------------------|---------------|-----------------|-------------------------|
|          |           | O IILITT COI           | 117013        | (REV. 07/28/20) |                         |
| UTI      | LITY      | COMPANY                | CONTACT       | PHONE NO.       | THE LOCA                |
| CABLE T  | ELEVISION | COMCAST                |               | (800) 934-6489  | THIS PLAI               |
| ELECTRIC | ;         | DUKE ENERGY            |               | (800) 521-2232  | not limite<br>ground by |
| FIBER OF | PTIC      | COMCAST                |               | (800) 934-6489  | ALSO BE                 |
| GAS      |           | VECTREN                | GREG MATHIAS  | (317) 776-5585  | IS NO AB<br>EVIDENCE    |
| SANITAR  | Y SEWER   | CITY OF SHELBYVILLE    | KEVIN KREDIT  | (317) 392-5131  | UNDERGR                 |
| STORM S  | SEWER     | CITY OF SHELBYVILLE    | DERRICK BYERS | (317) 364-4990  | PRIOR TO                |
| TELEPHO  | NE        | AT&T                   |               | (XXX) XXX-XXXX  |                         |
| WATER    |           | INDIANA AMERICAN WATER |               | (317) 392-0711  |                         |

!! CAUTION !! CATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON AN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but ted to, manholes, inlets, valves, and marks made upon the by others) AND ARE SPECULATIVE IN NATURE. THERE MAY OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE BOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING ROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR O ANY AND ALL CONSTRUCTION. CALL TOLL FREE

"811" OR 1-800-382-5544 INDIANA UNDERGROUND — C001

### **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.

### **EXISTING TOPOGRAPHY NOTES**

1. EXISTING TOPOGRAPHY IS PROVIDED BY: SCOTT T SUMERFORD LAND SURVEYING, PROJECT: 13N7E29-20-006 DATED: FEBRUARY 22, 2020.

### **DEMOLITION NOTES**

- 1. CLEAR AND GRUB ALL TREES AND VEGETATION NECESSARY FOR CONSTRUCTION.
- 2. PROTECT TREES TO REMAIN DURING CONSTRUCTION.
- 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.
- . 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.
- . 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 AUTHORITIES.
- 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 OTHERWISE.
- 3. ALL DIMENSIONS ARE TO FACE OF BRICK OR FACING MATERIAL, WHERE APPLICABLE.
- 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 NECESSARY.
- 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 TO JOIN EXISTING.
- 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 DIRECTIONS.
- 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.
- 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 PROPOSED GRADE AT HIS/HER OWN
- 5. AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL SHALL BE PERFORMED BY A LOADED TANDEM PNEUMATIC TIRE DUMP TRUCK MINIMUM GROSS VEHICLE WEIGHT OF 15 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
- 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 PROPOSED GRADE.
- 5. ALL UTILITY MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL STANDARDS FOR EACH UTILITY AGENCY HAVING JURISDICTION.
- TRENCHES FOR ALL UTILITY LINES SHALL BE BACKFILLED COMPLETELY WITH SELECT 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 PROPOSED STORM SEWER AND DRAINAGE APPURTENANCES SHALL BE IN CONFORMANCE WITH THE CITY OF SHELBYVILLE STORMWATER SPECIFICATIONS, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE STORMWATER SPECIFICATIONS SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE STORMWATER SPECIFICATIONS.

### **EROSION CONTROL NOTES**

CLEARING AND GRADING.

- 1. CONTRACTOR SHALL INSTALL ALL PERIMETER SILT FENCE AND SEDIMENT CONTROL BARRIERS PRIOR TO
- 2. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
- 3. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON
- SITE INSPECTION.
- 4. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING RE-GRADING, 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 DISCHARGE.

WATER RUNOFF. PROPER DISPOSAL OF ALL WASTE AND UNUSED BUILDING MATERIALS IS REQUIRED.

- 6. WASTE AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM
- 7. SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. 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 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 OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- 10. THE SITE IS NOT LOCATED WITHIN ANY FLOODPLAIN, FLOODWAY OR FLOODWAY FRINGE AS INDICATED ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR CITY OF SHELBYVILLE, SHELBY COUNTY, IN, MAP NUMBER 18145C0117C, DATED NOVEMBER 5, 2014.
- 11. SCHEDULE OF EARTHWORK ACTIVITIES:

SITE HAS BEEN STABILIZED.

- 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
- 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
- 14. ALL PROPOSED EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH THE CITY OF SHELBYVILLE STORMWATER SPECIFICATIONS, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE STORMWATER SPECIFICATIONS SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE STORMWATER SPECIFICATIONS.
- 15. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.

### **EXISTING LEGEND**

Project Benchmark Sign Location & Label Light Pole Abandoned Light Pole Base Power Pole Traffic Signal Post

Water Meter Pit Sewer Manhole (Storm or Sanitary)

Fire Hydrant

Storm Water Manhole with Grate Street Curb Inlet

10142 Brooks School Road, Suite 196 Fishers, Indiana 46037 Contact: Jeff Furlin (317) 509-0627 furlinjl@aol.com

Barred Rock, Inc.

d/b/a Zaxby's

**Circle City Rentals, LLC** 

d/b/a Aaron's

### BENCHMARK DATA

(DATUM: NAVD 88)

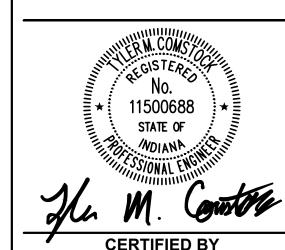
PROJECT BM BOX CUT IN CONCRETE PLATFORM TO TRAFFIC CONTROL BOX IN THE VERY EAST CORNER ABOUT 1.1' ABOVE GRADE. ELEV: 774.63



9025 River Road, Suite 200 | Indianapolis, Indiana 46240 TEL 317.547.5580 I FAX 317.543.0270 www.structurepoint.com

### |Zaxby's

1792 N. Riley Hwy Shelbyville, IN 46176



**ISSUANCE INDEX** DATE: 09/16/2020 PROJECT PHASE: CONSTRUCTION DOCUMENTS

REVISION SCHEDULE

NO. DESCRIPTION DATE

REPORT FOR INFORMATION ON ENVIRONMENTAL FINDINGS

(REV. 07/28/2

PHONE NO.

(800) 934-6489

(800) 521–2232

(800) 934-6489

(317) 776-5585

(317) 392-5131

(317) 364–4990

(XXX) XXX-XXXX

(317) 392-0711

UTILITY CONTACTS

COMCAST

DUKE ENERGY

COMCAST

**VECTREN** 

CITY OF SHELBYVILLE

CITY OF SHELBYVILLE

AT&T

INDIANA AMERICAN WATER

CONTACT

\_\_\_\_

----

GREG MATHIAS

KEVIN KREDIT

\_\_\_\_

DERRICK BYERS

UTILITY

CABLE TELEVISION

SANITARY SEWER

STORM SEWER

**TELEPHONE** 

WATER

ELECTRIC

FIBER OPTIC

**GENERAL NOTES:** CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION

CONTRACTOR SHALL REFER TO THE GEOTECHNICAL

ENGINEERING REPORT FOR INFORMATION ABOUT SOIL

CONTRACTOR SHALL REFER TO THE ENVIRONMENTAL

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

GEOTECHNICAL & ENVIRONMENTAL NOTE:

!! CAUTION !! HE 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 round by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE S NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND VIDENCE 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 — Project Number 2020.01229

**GENERAL NOTES** 

### 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
- 6. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, DRIVES, FACILITIES, ETC. WITHOUT OWNER PERMISSION OR AUTHORITY HAVING JURISDICTION.
- 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 CITY OF SHELBYVILLE 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 A. GENERAL SATISFACTORY SOILS NOT MAINTAINED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF

### . EXECUTION

- 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 B. PRODUCTS IS GRANTED. NOTIFY OWNER AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.
- 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 WATER.
- 3. REMOVE EXISTING ABOVE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND NECESSARY TO FACILITATE NEW CONSTRUCTION.
- 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
- 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.
- 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 WEIGHT.
- 10. COMPACTION OF SOIL BACKFILLS AND FILLS ARE TO BE IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. WHERE NO GEOTECHNICAL REPORT EXISTS, COMPACT ALL FILL MATERIAL BELOW STRUCTURES, PAVEMENTS, WALKS, UTILITY TRENCHES AND STEPS (AND WITHIN 5 FEET OF SAID AREAS) TO 95 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR DENSITY). COMPACT ALL FILL MATERIALS BELOW TURF OR UNPAVED AREAS TO 85 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-1557 (MODIFIED 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: 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  $\frac{1}{2}$  INCH WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE.
- 12. QUALITY CONTROL: QUALIFIED GEOTECHNICAL ENGINEER TO BE ENGAGED AS TESTING AGENCY AS DIRECTED BY
- 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

### <u>STORM SEWER:</u>

### . 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 THE FIELD, BEFORE WORK IS STARTED OR RESUMED. 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

1. 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 FOR COUPLING JOINTS.

IS GRANTED. NOTIFY OWNER AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.

- 2. PVC PIPE AND FITTINGS: PIPE: ASTM F 949, PVC, OR ASTM 0-3034, F-1336, F-679, 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
- 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:
- 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: i. CEMENT: ASTM C 150, TYPE III
  - ii. FINE AGGREGATE: ASTM C 33, SAND
  - iii. COARSE AGGREGATE: ASTM C 33, CRUSHED GRAVEL iv. WATER: POTABLE
- 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, GRADE 60 DEFORMED STEEL.
- 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. STORM SEWER (CONT.):

- 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 MANUFACTURERS WRITTEN INSTRUCTIONS.
- 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
- 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 FOLLOWING: 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 92.5 PERCENT OF PIPING DIAMETER.

REPLACE DEFECTIVE PIPING USING NEW MATERIALS, AND REPEAT INSPECTION UNTIL DEFECTS ARE WITHIN

- iii. DAMAGE: CRUSHED, BROKEN, CRACKED, OR OTHERWISE DAMAGED PIPING. iv. INFILTRATION: WATER LEAKAGE INTO PIPING. v. EXFILTRATION: WATER LEAKAGE FROM OR AROUND PIPING
- 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.

- . 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

- 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. a. FOR HOT-MIX ASPHALT, LIMIT NATURAL SAND TO A MAXIMUM OF 20 PERCENT BY WEIGHT OF
- THE TOTAL AGGREGATE MASS. iii. MINERAL FILLER: ASTM D 242 OR AASHTO M 17, ROCK OR SLAG DUST, HYDRAULIC CEMENT, OR OTHER INERT MATERIAL
- 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
- i. WATER: POTABLE. vii. 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 PAVING PRODUCED FROM ALL NEW MATERIALS. ii. 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. iii. 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.
  - BASE COURSE: 25.0 MM OR 19.0 MM (AS INDICATED ON DRAWINGS) c. SURFACE COURSE: 9.5MM

- 1. EXAMINATION 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 POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES. PROOFROLL TO BE PERFORMED BY QUALIFIED GEOTECHNICAL ENGINEER.
  - a. COMPLETELY PROOF-ROLL SUBGRADE IN ONE DIRECTION LIMIT VEHICLE SPEED
  - PROOF ROLL WITH A LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS
  - EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS, AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY ENGINEER, AND REPLACE WITH COMPACTED BACKFILL OR FILL AS

d. PROCEED WITH PAVING ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

- i. GENERAL: IMMEDIATELY BEFORE PLACING ASPHALT MATERIALS, REMOVE LOOSE AND DELETERIOUS MATERIAL FROM SUBSTRATE SURFACES. ENSURE THAT PREPARED SUBGRADE IS READY TO RECEIVE ii. 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. a. MIX HERBICIDE WITH PRIME COAT IF FORMULATED BY MANUFACTURER FOR THAT PURPOSE2 iii. 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. a. 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 EVAPORATED.
- b. 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. a. ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS.
- 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 EACH COURSE TO REQUIRED GRADE, CROSS SECTION, AND

REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.

- 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 ONE-WAY SLOPES UNLESS OTHERWISE INDICATED. REGULATE PAVER MACHINE SPEED TO OBTAIN SMOOTH, CONTINUOUS SURFACE FREE OF PULLS AND TEARS IN ASPHALT-PAVING MAT.
- ii. PLACE PAVING IN CONSECUTIVE STRIPS NOT LESS THAN 10 FEET WIDE UNLESS INFILL EDGE STRIPS OF A LESSER WIDTH ARE REQUIRED. a. 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
- b. COMPLETE A SECTION OF ASPHALT BASE COURSE BEFORE PLACING ASPHALT SURFACE iii. 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
- i. CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAVING SECTIONS. CONSTRUCT JOINTS FREE OF DEPRESSIONS, WITH SAME TEXTURE AND SMOOTHNESS AS OTHER SECTIONS OF HOT-MIX

ASPHALT TO PREVENT SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.

- ASPHALT COURSE 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 EITHER "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 DISPLACEMENT. COMPACT ASPHALT AT JOINTS TO A DENSITY WITHIN 2 PERCENT OF SPECIFIED COURSE

### ASPHALT PAVING (CONT.):

SURFACE SMOOTHNESS

SPECIFICATIONS

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

HOT-MIX ASPHALT COURSE HAS BEEN UNIFORMLY COMPACTED TO THE FOLLOWING DENSITY:

- VIBRATORY-PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS. a. COMPLETE COMPACTION BEFORE MIX TEMPERATURE COOLS TO 185 DEG F ii. BREAKDOWN ROLLING: COMPLETE BREAKDOWN OR INITIAL ROLLING IMMEDIATELY AFTER ROLLING JOINTS AND OUTSIDE EDGE. EXAMINE SURFACE IMMEDIATELY AFTER BREAKDOWN ROLLING FOR INDICATED CROWN,
- GRADE, AND SMOOTHNESS. CORRECT LAYDOWN AND ROLLING OPERATIONS TO COMPLY WITH REQUIREMENTS. iii. INTERMEDIATE ROLLING: BEGIN INTERMEDIATE ROLLING IMMEDIATELY AFTER BREAKDOWN ROLLING WHILE HOT-MIX ASPHALT IS STILL HOT ENOUGH TO ACHIEVE SPECIFIED DENSITY. CONTINUE ROLLING UNTIL
- 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.
- iv. FINISH ROLLING: FINISH ROLL PAVED SURFACES TO REMOVE ROLLER MARKS WHILE HOT-MIX ASPHALT IS
- WHILE SURFACE IS BEING COMPACTED AND FINISHED. TRIM EDGES OF PAVEMENT TO EDGE SHAPING: PROPER ALIGNMENT. BEVEL EDGES WHILE ASPHALT IS STILL HOT; COMPACT THOROUGHLY. vi. 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
- viil. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED viiil. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO
- 6. INSTALLATION TOLERANCES PAVEMENT THICKNESS: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN THE 4. JOINTS **FOLLOWING TOLERANCES:** 
  - a. BASE COURSE: PLUS OR MINUS 1/2 INCH b. SURFACE COURSE: PLUS 1/4 INCH NO MINUS. II. 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
- 7. FIELD QUALITY CONTROL 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 TO ASTM D 3549. iii. SURFACE SMOOTHNESS: FINISHED SURFACE OF EACH HOT-MIX ASPHALT COURSE WILL BE TESTED FOR 5. CONCRETE PLACEMENT COMPLIANCE WITH SMOOTHNESS TOLERANCES. iv. 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
- b. IN-PLACE DENSITY OF COMPACTED PAVEMENT WILL BE DETERMINED BY TESTING CORE SAMPLES ACCORDING TO ASTM D 1188 OR ASTM D 2726. v. ONE CORE SAMPLE WILL BE TAKEN FOR EVERY 1000 SQ. YD. OR LESS OF INSTALLED PAVEMENT, NO FEWER THAN THREE CORES TAKEN. vi. 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 vii. REPLACE AND COMPACT HOT-MIX ASPHALT WHERE CORE TESTS WERE TAKEN. viii. REMOVE AND REPLACE OR INSTALL ADDITIONAL HOT-MIX ASPHALT WHERE TEST RESULTS OR

MEASUREMENTS 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 CONCRETE APRONS

### 2. ACTION SUBMITTALS

- PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED. OTHER ACTION SUBMITTALS
- DESIGN MIXTURES: FOR EACH CONCRETE PAVING MIXTURE. INCLUDE ALTERNATE DESIGN MIXTURES WHEN CHARACTERISTICS OF MATERIALS PROJECT CONDITIONS, WEATHER, TEST
  - RESULTS, OR OTHER 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 COMPREHENSIVE TESTING OF CURRENT MATERIALS.

### 3. QUALITY ASSURANCE

- READY-MIX-CONCRETE MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING READY-MIXED CONCRETE PRODUCTS AND THAT COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT. ii. ACI PUBLICATIONS: COMPLY WITH ACI 301 (ACI 301M) UNLESS OTHERWISE INDICATED
- HANDICAP STANDARDS: PROVIDE RAMPS INDICATED FOR HANDICAP ACCESS IN ACCORDANCE WITH ANSI A117 AND FEDERAL AMERICANS WITH DISABILITIES ACT (ADA).

- 1. STEEL REINFORCEMENT RECYCLED CONTENT: POST CONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT NOT LESS THAN 25 PERCENT.
  - ii. PLAIN-STEEL WELDED WIRE REINFORCEMENT: ASTM A 185/A 185M, FABRICATED FROM AS-DRAWN STEEL WIRE INTO FLAT SHEETS.
  - iii. DEFORMED-STEEL WELDED WIRE REINFORCEMENT: ASTM A 497/A 497M, FLAT SHEET. iv. REINFORCING BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420); DEFORMED.
  - v. PLAIN-STEEL WIRE: ASTM A 82/A 82M, AS DRAWN. vi. DEFORMED-STEEL WIRE: ASTM A 496/A 496M
  - vii. DOWEL BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420) PLAIN-STEEL BARS; ZINC COATED (GALVANIZED) AFTER FABRICATION ACCORDING TO ASTM A 767/A 767M, CLASS I COATING. CUT BARS TRUE TO 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. i. CEMENTITIOUS MATERIAL: USE THE FOLLOWING CEMENTITIOUS MATERIALS, OF SAME TYPE, BRAND, AND B.
- SOURCE THROUGHOUT PROJECT: a. PORTLAND CEMENT: ASTM C 150, PORTLAND CEMENT TYPE I FLY ASH: ASTM C 618, CLASS C OR CLASS F. GROUND GRANULATED BLAST-FURNACE SLAG: ASTM C 989, GRADE 100 OR 120.
- ii. NORMAL-WEIGHT AGGREGATES: ASTM C 33,UNIFORMLY GRADED, AND AS FOLLOWS: a. 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.
- iii. WATER: POTABLE AND COMPLYING WITH ASTM C 94/C 94M. iv. AIR-ENTRAINING ADMIXTURE: ASTM C 260.
  v. CHEMICAL ADMIXTURES: ADMIXTURES CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER D. ADMIXTURES AND TO CONTAIN NOT MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF CEMENTITIOUS MATERIAL.

. USE CRUSHED LIMESTONE COARSE AGGREGATE FOR CONCRETE EXPOSED TO WEATHER.

- vi. NOTE: WHERE CLASS A, B, OR C CONCRETE IS REFERENCE IN PLANS OR SPECIFICATIONS, THE CLASS IS AS DEFINED IN ACI 347-04. 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.
- ii. MOISTURE-RETAINING COVER: ASTM C 171, POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE iii. WATER: POTABLE iv. EVAPORATION RETARDER: WATERBORNE, MONOMOLECULAR, FILM FORMING, MANUFACTURED FOR
- APPLICATION TO FRESH CONCRETE. v. CLEAR, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 1, CLASS B, vi. WHITE, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 2, CLASS B,
- FIBROUS REINFORCEMENT: 100% VIRGIN HOMOPOLYMER POLYPROPYLENE MULTIFILAMENT FIBERS FOR SECONDARY REINFORCEMENT OF CONCRETE, ASTM C 116, TYPE III. SHALL CONTAIN NO REPROCESSED OLEFIN MATERIALS.
- SI CONCRETE SYSTEMS, OR APPROVED EQUAL 5. RELATED MATERIALS 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 ACCORDANCE WITH ASTM C 672.

a. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE

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

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

i. PREPARE DESIGN MIXTURES, PROPORTIONED ACCORDING TO ACI 301 (ACI 301M), WITH THE FOLLOWING PROPERTIES: a. COMPRESSIVE STRENGTH (28 DAYS): 4000 PSI (27.6 MPA).

### **CONCRETE PAVING (CONT.):**

- 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.

### 7. CONCRETE MIXING READY-MIXED CONCRETE: MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE

### ACCORDING TO ASTM C 94/C 94M. FURNISH BATCH CERTIFICATES FOR EACH BATCH DISCHARGED AND USED IN THE WORK.

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

SUPPORTING REINFORCEMENT.

FROM CONCRETE WITHOUT DAMAGE.

UNLESS PAVING TERMINATES AT ISOLATION JOINTS.

- 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 CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION
- 3. STEEL REINFORCEMENT GENERAL: COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND

### 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. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVING 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 CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, OTHER FIXED OBJECTS, AND 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. v. 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.
- 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,
- 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 SPREADING SURFACE TREATMENTS.

### 6. CONCRETE PROTECTION AND CURING i. 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 BEFORE FLOAT FINISHING
- CONCRETE SURFACE. CURING METHODS: CURE CONCRETE BY MOISTURE CURING, MOISTURE-RETAINING-COVER CURING CURING COMPOUND, OR A COMBINATION OF THESE. vi. 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

iv. BEGIN CURING AFTER FINISHING CONCRETE BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM

### 7. PAVING TOLERANCES

CONCRETE HAS CURED 28 DAYS.

UTILITY SERVICES AS REQUIRED.

- COMPLY WITH TOLERANCES IN ACI 117 AND AS FOLLOWS: a. 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) JOINT SPACING: 3 INCHES (75 MM)

MINIMUM WET FILM THICKNESS OF 15 MILS (0.4 MM).

CONTRACTION JOINT DEPTH: PLUS 1/4 INCH (6 MM), NO MINUS. JOINT WIDTH: PLUS 1/8 INCH (3 MM), NO MINUS. II. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE MARKINGS OF DIMENSIONS INDICATED WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE A

### 8. 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. ii. PROTECT CONCRETE PAVING FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVING 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

THE CONTRACTOR SHALL REMOVE AND DISPOSE OFF SITE, ALL EXISTING STRUCTURES, FENCES, CONCRETE AND PAVEMENT ON SITE, UNLESS NOTED TO REMAIN ON THE CONTRACT DRAWINGS.

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

- THIS SECTION REQUIRES REMOVAL AND DISPOSAL, OFF SITE, OF THE FOLLOWING: ASPHALT PARKING LOT.
- 2. MISCELLANEOUS CONCRETE, STORM SEWER, PLANT MATERIAL, UNDERGROUND CONDUITS, SITE LIGHTS, ETC., LOCATED ON SITE.

SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 1 SPECIFICATION SECTIONS.

A PROPOSED SCHEDULE OF OPERATIONS COORDINATION FOR SHUTOFF, CAPPING, AND CONTINUATION OF

### PROVIDE A DETAILED SEQUENCE AND SCHEDULE OF DEMOLITION AND REMOVAL WORK TO BE JOB CONDITIONS

WORK PROGRESSES. TRANSPORT SALVAGED ITEMS FROM THE SITE AS THEY ARE REMOVED.

i. STORAGE OR SALE OF REMOVED ITEMS WILL NOT BE PERMITTED ON SITE.

EXPLOSIVES: USE OF ANY TYPE OF EXPLOSIVES WILL NOT BE PERMITTED. 3. TRAFFIC: CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. i. DO NOT CLOSE OR OBSTRUCT ROADS, STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY GOVERNING AUTHORITIES.

4. PROTECTIONS: ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION. CONDUCT OPERATIONS TO

PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND OTHER FACILITIES AND INJURY TO PERSONS.

1. SALVAGED MATERIALS: ITEMS OF SALVAGEABLE VALUE TO CONTRACTOR MAY BE REMOVED FROM STRUCTURE AS

5. DAMAGES: PROMPTLY REPAIR ANY DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS. 6. UTILITY SERVICES: MAINTAIN EXISTING UTILITIES TO STAY IN SERVICE AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DISCONNECT, CAP AND REMOVE UTILITY SERVICES PER LOCAL REQUIREMENTS. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTIONS HAVE BEEN COMPLETED TO THE SATISFACTION OF LOCAL UTILITIES.

INCLUDING CONCRETE SLABS, TO A DEPTH OF NOT LESS THAN 48 INCHES BELOW LOWEST FOUNDATION LEVEL

2. FILLING VOIDS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION STRUCTURES. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING: F. DISPOSAL OF DEMOLISHED MATERIALS FIBERMESH 150; PROPEX CONCRETE SYSTEMS CORP., STEALTH FIBER MICRO REINFORCEMENT; 1. GENERAL: REMOVE WEEKLY FROM SI 1. GENERAL: REMOVE WEEKLY FROM SITE ACCUMULATED DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. 2. REMOVAL: TRANSPORT MATERIALS REMOVED FROM DEMOLITION OPERATIONS AND LEGALLY DISPOSE OF OFF-SITE

1. BELOW-GRADE CONSTRUCTION: DEMOLISH FOUNDATION WALLS AND OTHER BELOW-GRADE CONSTRUCTION

- A. ALL WATER MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF SHELBYVILLE STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- A. ALL SANITARY MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF SHELBYVILLE STANDARDS AND SPECIFICATIONS, LATEST EDITION.

### Barred Rock, Inc. d/b/a Zaxby's Circle City Rentals, LLC d/b/a Aaron's

10142 Brooks School Road, Suite 196 Fishers, Indiana 46037 Contact: Jeff Furlin (317) 509-0627 furlinjl@aol.com

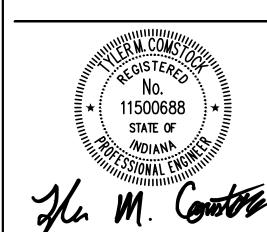


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**CERTIFIED BY** 

ISSUANCE INDEX

CONSTRUCTION DOCUMENTS

DATE:

09/16/2020

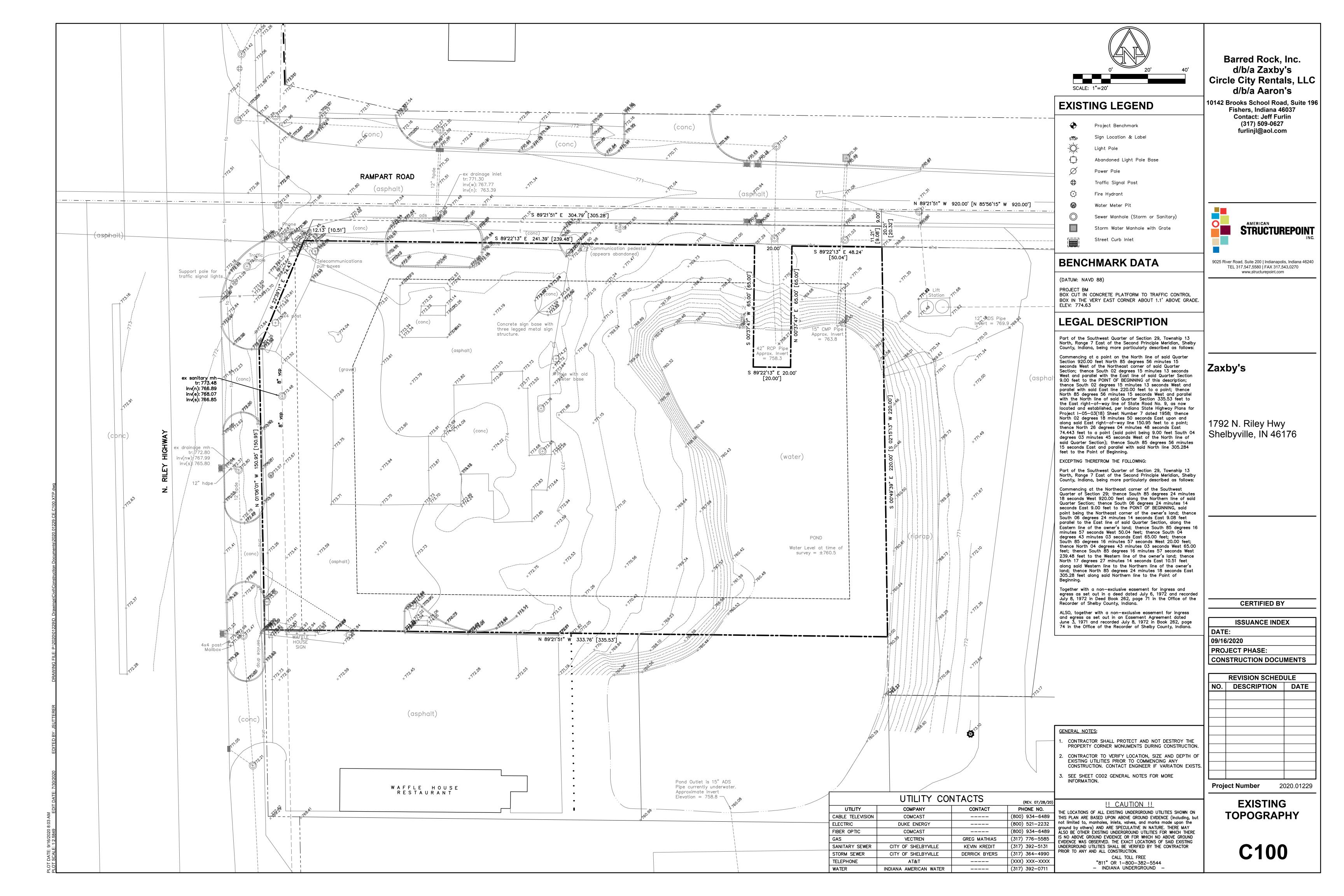
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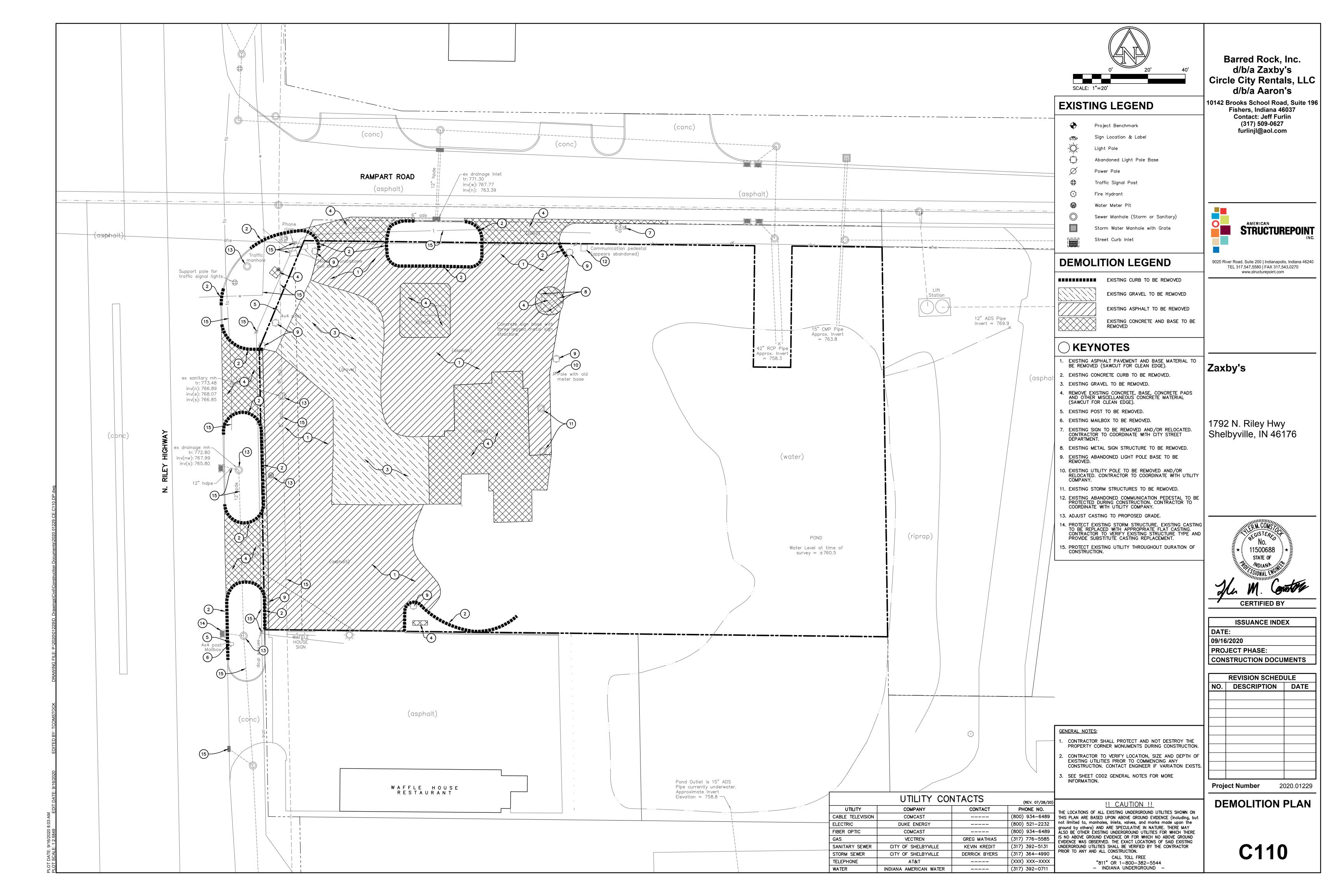
**REVISION SCHEDULE** NO. DESCRIPTION DATE

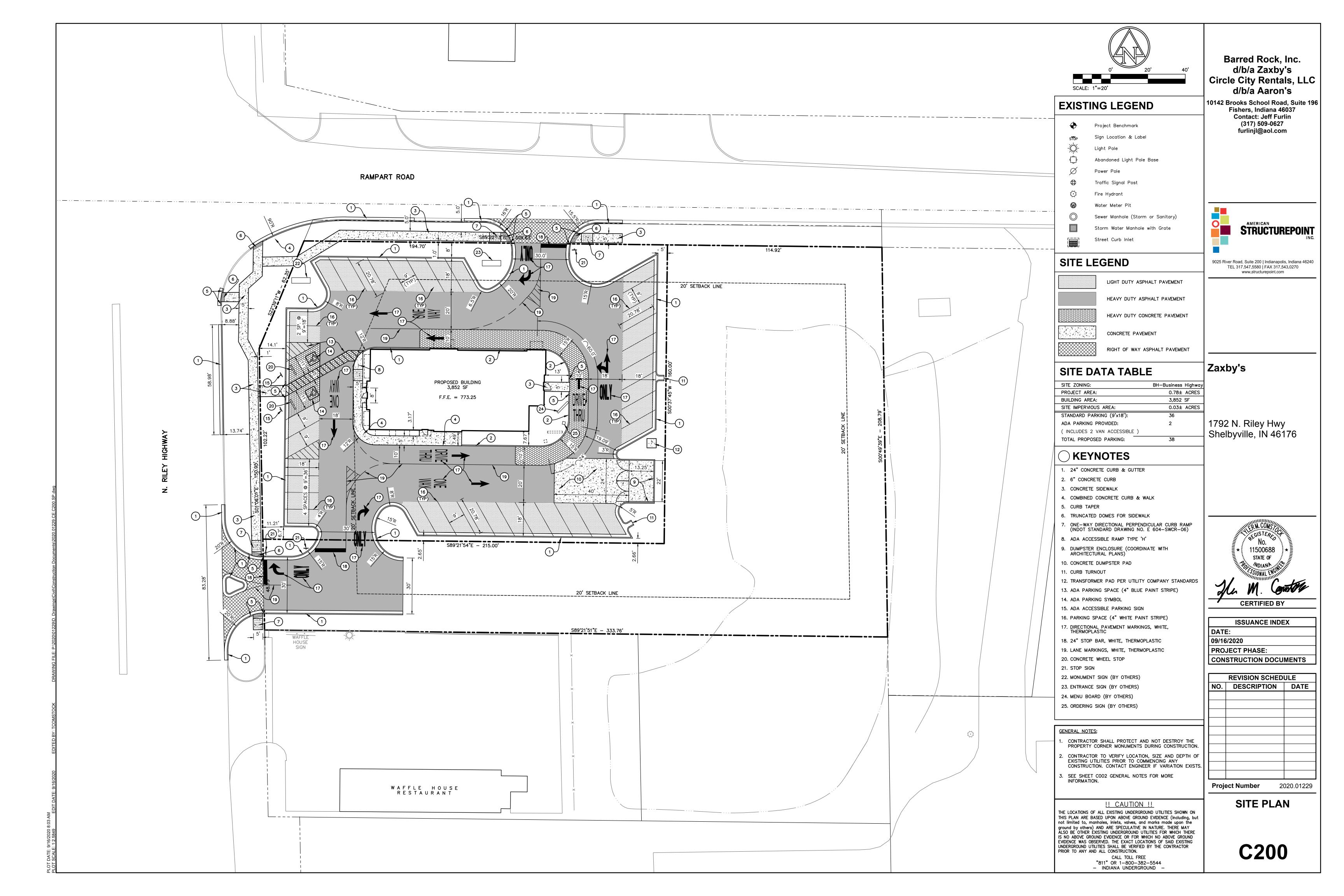
**SPECIFICATIONS** 

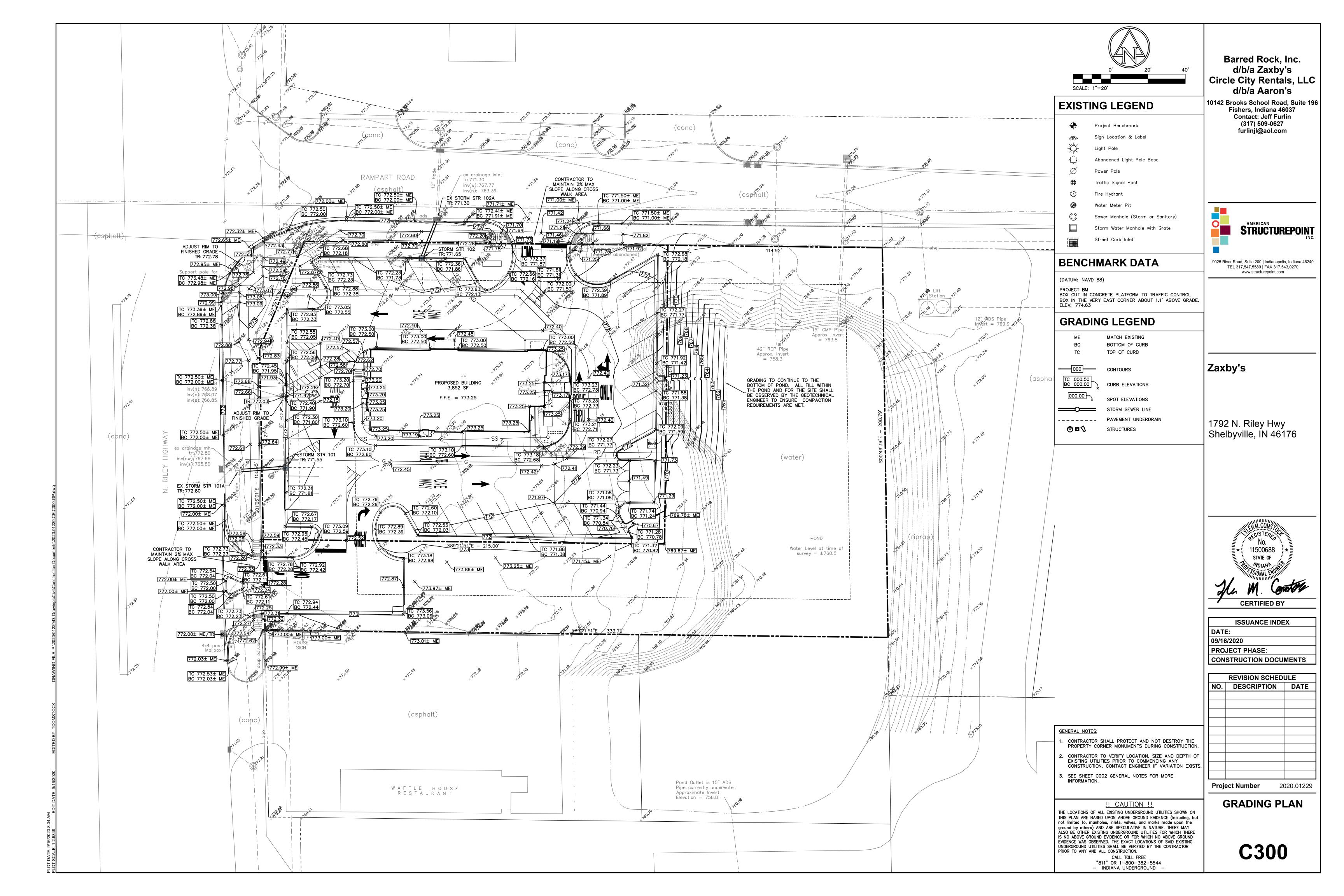
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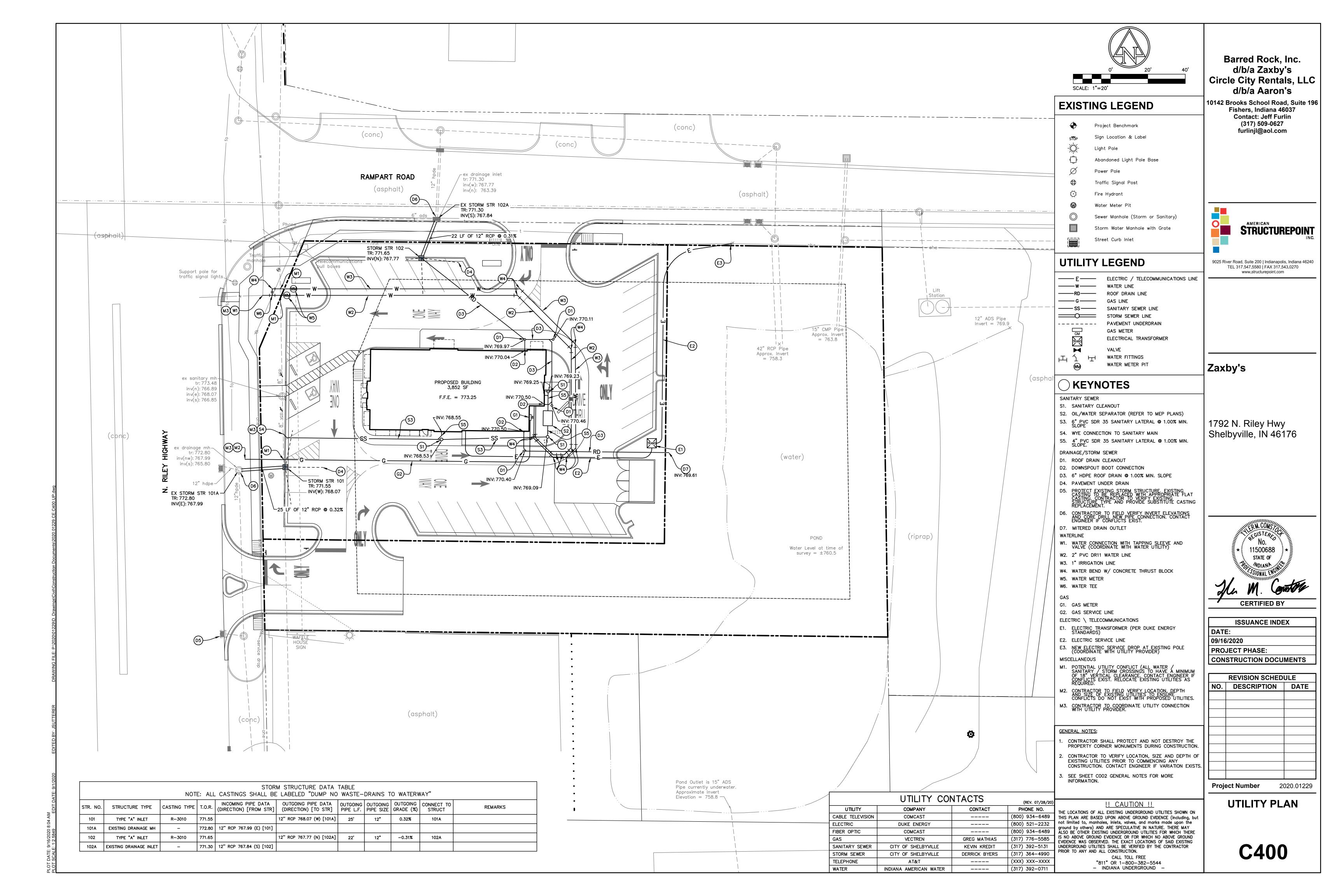
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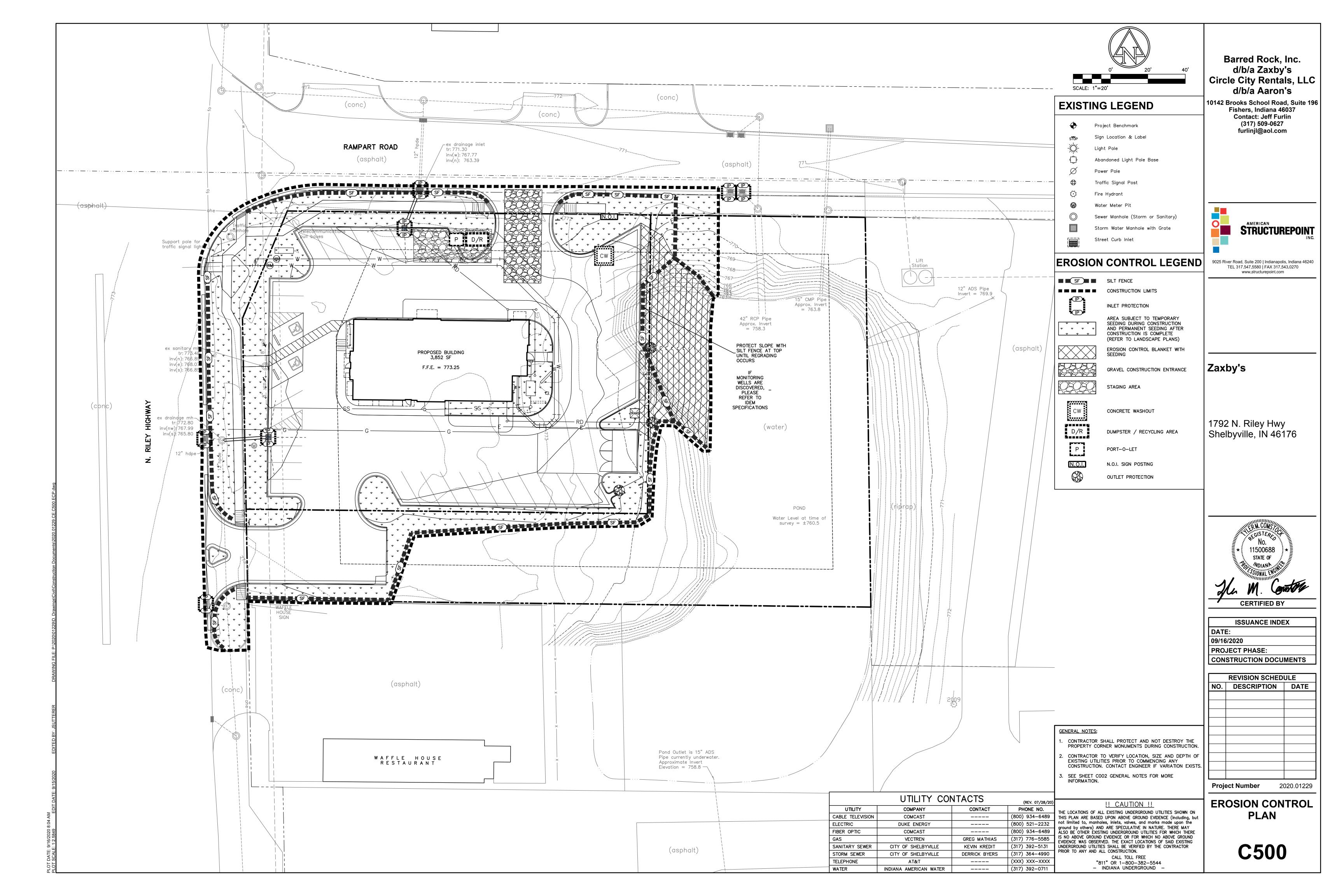












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A8 STATE AND FEDERAL WATER QUALITY PERMITS

IDEM Rule 5 NOI

A9 SPECIFIC POINT WHERE STORMWATER DISCHARGE WILL LEAVE THE SITE

Stormwater drainage from the site will be conveyed by proposed storm sewer infrastructure to existing stormwater facilities along the west and north sides of the site. Other stormwater from the site will run off into the existing wet detention basin to the east of the project.

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

There are no lakes, wetlands, or watecourses adjacent to the site. Some storm runoff does run to a small detention pond to the east of the site.

A11 IDENTIFICATION OF ALL RECEIVING WATERS

The Big Blue River is the ultimate receiving water 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 Shelby County, Indiana, Flood Insurance Rate Map 18145C0117C dated November

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

Pre-construction 10-year discharge: 3.81 cfs Post-construction 10-year discharge: 3.11 cfs

A15 ADJACENT LAND USE

Business Highway **Business Highway** Business Highway Single Family Residential

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

Approximate areas of existing vegetative cover are as shown on the Existing Topography Plan.

A18 SOILS MAP INCLUDING SOIL DESCRIPTION AND LIMITATIONS

The Natural Resources Conservation Service (NRCS) Web Soil Survey of Shelby County, Indiana, indicates (Gravel Pits and Nineveh Loam) are located on the site.

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 pavement system, or treatment of the subgrade with lime.

A19 LOCATIONS, SIZE, AND DIMENSIONS FOR PROPOSED STORMWATER SYSTEMS

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

A20 PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT

Some offsite construction will take place during this project. The new site will extend over a portion of the existing detention pond, which will be partially filled in and a new slope established down to the normal pool.

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

Excess soil shall be immediately stockpiled, surrounded with silt fence and seeded and/or removed from the construction site in accordance with all applicable laws. If topsoil stockpiles are anticipated for this project, they are shown on the Erosion Control Plan.

A22 EXISTING SITE TOPOGRAPHY

Refer to the Existing Topography Plan.

A23 PROPOSED FINAL SITE TOPOGRAPHY

Refer to the Grading Plan.

31 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

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

Material storage areas (more specifically described below) Construction waste material

Fuel storage areas and fueling stations Exposed soils

Leaking vehicles and equipment Sanitary waste from temporary toilet facilities

Windblown dust Soil tracking off site from construction equipment The following construction materials may be staged or stored on site at various points during development of

Structural fill

Rock rip-rap

Pavement Base Stone

HDPE, PVC, RCP or Ductile Iron pipe Precast concrete, HDPE or PVC drainage and sanitary structures

B2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND-DISTURBING <u>ACTIVITIES</u>

Install protection fencing for existing karst in areas adjacent to project limits.

Preconstruction Activity The exact locations of all existing utilities within the project limits are to be verified prior to construction. Schedule pre-construction meeting with local stormwater authority. • Install protection fencing for existing trees to remain in place within the project limits.

Construction Site Access

Install gravel construction entrance.

Post the NOI at the construction entrance. • Install construction staging pads, fueling station, material storage areas, concrete washout, construction parking areas and stabilize construction routes.

Perimeter Controls

• Utilize the gravel construction entrance for installation of the perimeter silt fence. Add stone if needed.

Initial Land Clearing and Grading Activities Add protection measures to existing inlets. Strip the topsoil and stabilize the topsoil stockpile.

Secondary Land Grading Activities Begin site grading/construction of detention basins and stabilize any soil stockpiles that will be left dormant for more than 10 days.

Complete the cut and fills on the site. Final grade and seed the pond slopes. Install check dams and stabilize slopes with erosion control blankets. Install storm sewer system and install inlet protection immediately upon completion of the inlet and install

Surface Stabilization

 Apply temporary seeding and stabilize slopes in areas where rough grading has been completed. Apply permanent seeding and stabilize slopes in areas where final grading has been completed.

**Building Construction** Prior to building construction install stone surface for paved areas.

riprap outlet protection prior to installing outlets.

Building pads left dormant for more than 10 days, must be temporarily seeded. Start building construction. Install staging area for building materials and stabilize.

Final Shaping/Landscaping

 Utilize topsoil salvage in applicable areas and apply permanent seeding. Apply permanent seeding the perimeter of the site.

Complete utility installation, curbs, paying and building construction Install landscapina plant material and stabilize all disturbed areas.

Remove all erosion and sediment control practices when areas have a uniform grass cover.

B3 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS

Construction entrances will be in place prior to any site construction or demolition. Entrances are shown on

the Erosion 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, and rock donuts will be installed to slow runoff to inlets. Straw bales and silt fences will not be allowed as concentrated flow protection measures. Refer to

the Erosion Control Plan for locations and the Erosion Control Details for details. **B6 STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS** 

The contractor shall install appropriate inlet protection measures at each inlet. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details. Straw bales will not be allowed as inlet protection

**B7 RUNOFF CONTROL MEASURES** 

Riprap has been added to the outlets of the storm infrastructure and curb turnouts to reduce energy of the stormwater runoff. See the Erosion Control Plan for details.

**B8 STORMWATER OUTLET PROTECTION SPECIFICATIONS** 

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 and the Erosion Control Details for details.

B10 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE

Refer to the Erosion Control Plan for locations of each stormwater quality measure and the Erosion Control

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

**B12 PERMANENT SURFACE STABILIZATION SPECIFICATIONS** 

amendments, seed mixtures and mulching.

A. 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 not less than 4 percent phosphoric acid and 2 percent potassium. At least 50 percent of nitrogen to be organic 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, 4 percent phosphorous, and 2 percent potassium by weight. Slow-release fertilizer for trees and shrubs: granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorous and potassium made up of a composition by weight of 5 percent

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 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.

Install erosion control blankets as indicated on the plan. Protect seeded areas 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

Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with a fine spray.

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.

Refer to the Permanent Seeding Details within the Erosion Control Detail Sheet, for timing of permanent seeding, grass seed specifications and mulching specifications.

B13 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

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

<u>Hazardous Waste</u> Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the

Use containment berms in fueling and maintenance areas and where potential for spills is high.

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.

During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After 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 toilet, 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 location of said facilities.

<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 containing such materials shall be collected, removed from the site, and disposed of in accordance with the federal, state, and local regulations.

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

Material Handling and Spill Prevention

Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event o 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 occurrences. Each contractor and subcontractor is responsible for complying with these reporting requirements.

Concrete Washout

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.

Spill Response Plan Minor - Small spills that typically involve oil, gasoline, paint, hydraulic fluid, etc., can be controlled by the first responder at the discovery of the spill.

• Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury. Use absorbent material to clean—up spill material and any subsequently contaminated soil and dispose of

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: 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. Governing authorities 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

As soon as possible but within 2 hours of discovery, contact the local agency responsible for spill management. The following information should be noted for future reports to the agency: •• Name, address and phone number of person making the spill report

•• The time 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

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

Inspection Schedule/Reporting 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 sites where runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists), such inspections shall be conducted at least once every month.

Inspections shall be conducted and a written report prepared, by a designated and qualified person familiar with the USEPA NPDES Storm Water General Permit, this SWPPP, and the Project.

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 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 governing

Construction Entrance Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking. Each contractor and subcontractor shall be responsible for maintaining the Construction Entrance and other controls as described in this SWPPP.

Material Storage Inspections

specific controls:

authority.

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 storage areas used solely by the subject project are considered to be part of the project and must be included in the erosion control plans and the site inspection reports.

Soil Stabilization Inspections 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 operator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.

<u>Erosion and Sediment Control Inspections</u> 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

Geotextiles/Erosion Control Mats: Missing or loose matting must be replaced or re—anchored. 2. 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. Mulching: Inspect for thin or bare spots caused by natural decomposition or weather-related events.

5. Sediment Trap: Accumulated silt shall be removed and the basin shall be re-graded to its original

Mulch in high traffic areas should be replaced on a regular basis to maintain uniform protection.

original storage capacity. The removed sediment shall be stockpiled or redistributed in areas that are protected from erosion. Sediment Basin: Inspect frequently to check for damage and to ensure obstructions are not diminishing the effectiveness of the structures. Sediment shall be removed and the basin shall be re-araded to its original dimensions at such point that the capacity of the impoundment has been reduced to 20% of its original storage capacity. The removed sediment shall be stockpiled or redistributed in areas that are

Vegetation: Protect newly seeded areas from excessive runoff and traffic until vegetation is established.

dimensions at such point that the capacity of the impoundment has been reduced to one—half of its

protected from erosion. Silt Fence: Removal of built-up sediment will occur when the sediment reaches one-third the height of Stabilized Construction Entrance: Periodic re—grading and top dressing with additional stone.

Straw Bales: Replace straw bales that show signs of deterioration.

Establish a watering and fertilizing schedule.

be prevented from becoming a pollutant source for stormwater discharges through screening of outfalls In the event that sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency 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.

11. Good Housekeeping: Litter, construction debris, and construction chemicals exposed to stormwater shall

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

All permittees must submit an NOT within thirty (30) days after one or more of the following conditions

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

2. Another operator/permittee has assumed control over all areas of the site that have not been finally

3. In residential construction operations, temporary stabilization has been completed and the residence has

been transferred to the homeowner. B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS

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

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE The proposed land use is for commercial food service. 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 de—icing materials.

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.

Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings) C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION

Pollutant Source: Lawn and landscape areas

post-construction stormwater quality BMPs.

blanket and/or seed as necessary.

It is recommended that no further stormwater quality measures be implemented beyond the existing detention nond to the east of the site.

A wet detention pond detains storm water runoff long enough for contaminated sediments to settle and

C3 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES.

remain in the pond and allow the water in the pond to be displaced by the next rain event. The sedimentation process removes particulates, organic matter, and metals from the water while nutrients are removed through biological uptake. By capturing and retaining runoff, wet ponds control both storm water quality and quantity

in fertilizer overspray can be incorporated by the owner and/or occupant. C4 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

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

The proposed detention pond, which will be part of the existing pond, will be located east of the site. Refer to C300 for more information regarding the pond.

complete, are described below. Refer to the BMP Operations and Maintenance Manual for more detailed

Maintenance requirements for the stormwater quality measures which will remain in place after construction is

accordance with all applicable laws. Areas that show sign of erosion shall be stabilized with erosion control

C5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST—CONSTRUCTION STORMWATER QUALITY MEASURES

maintenance requirements. <u>Detention Ponds (Wet or Dry)</u> Inspect periodically as needed or at least every six months. Sediment shall be disposed of off site in

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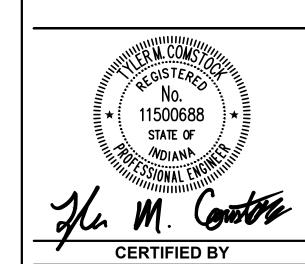
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|Zaxby's

1792 N. Riley Hwy Shelbyville, IN 46176



**ISSUANCE INDEX** 

CONSTRUCTION DOCUMENTS

DATE:

09/16/2020

PROJECT PHASE:

REVISION SCHEDULE NO. DESCRIPTION DATE **Project Number** 2020.01229

STORM WATER **POLLUTION PREVENTION PLAN** 

SPECIFICATIONS DRAINAGE AREA

LIMITED TO ONE-QUARTER ACRE PER 100 LINEAR FEET OF FENCE. • FURTHER RESTRICTED BY SLOPE STEEPNESS (SEE TABLE 1).

EFFECTIVE LIFE • SIX MONTHS (MAXIMUM).

LOCATION • INSTALLED PARALLEL TO THE SLOPE CONTOUR.

 MINIMUM OF 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A BROAD, SHALLOW SEDIMENT POOL.

ACCESSIBLE FOR MAINTENANCE (REMOVAL OF SEDIMENT AND SILT FENCE REPAIR).

SPACING

| BLE 1. SLOPE STEEPNESS RESTRICTIONS |              |          |  |  |
|-------------------------------------|--------------|----------|--|--|
| PERCENT SLOPE MAXIMUM DISTANCE      |              |          |  |  |
| < 2% < 50:1 100 FE                  |              | 100 FEET |  |  |
| 2% – 5%                             | 50:1 TO 20:1 | 75 FEET  |  |  |
| <b>%</b> – 10 <b>%</b> *            | 20:1 TO 10:1 | 50 FEET  |  |  |
| 0% - 20%*                           | 10:1 TO 5:1  | 25 FEET  |  |  |
| > 20%                               | > 5:1        | 15 FEET  |  |  |

\*CONSIDER OTHER ALTERNATIVES. NOTE: MULTIPLE ROWS OF SILT FENCE ARE NOT RECOMMENDED ON THE SAME SLOPE.

DEPTH: EIGHT INCHES MINIMUM.

TO PLOW IN THE SILT FENCE.

• WIDTH: FOUR INCHES MINIMUM. AFTER INSTALLING THE FENCE, BACKFILL WITH SOIL MATERIAL AND COMPACT (TO BURY AND ANCHOR THE LOWER PORTION OF THE FENCE FABRIC). NOTE: AN ALTERNATIVE TO TRENCHING IS TO USE MECHANICAL EQUIPMENT

MATERIALS AND SILT FENCE SPECIFICATIONS FABRIC - WOVEN OR NON-WOVEN GEOTEXTILE FABRIC, MEETING SPECIFIED MINIMUMS OUTLINED IN TABLE 2.

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

| PHYSICAL PROPERTY  | WOVEN<br>GEOTEXTILE FABRIC                         | NON-WOVEN<br>GEOTEXTILE FABRIC                   |
|--|--|--|
| FILTERING EFFICIENCY   | 85%  | 85%  |
| TEXTILE STRENGTH AT 20%<br>ELONGATION<br>STANDARD STRENGTH<br>EXTRA STRENGTH | 30 LBS. PER LINEAL INCH<br>50 LBS. PER LINEAL INCH | 50 LBS. PER LINEAL INC<br>70 LBS. PER LINEAL INC |
| SLURRY FLOW RATE   | 0.3 GAL./MIN./SQUARE FOOT                          | 4.5 GAL./MIN./SQUARE FOOT                        |
| WATER FLOW RATE  | 15 GAL./MIN./SQUARE FOOT                           | 220 GAL./MIN./SQUARE FOOT                        |
| UV RESISTANCE  | 70%  | 85%  |
| POST SPACING   | 7 FEET   | 5 FEET   |

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
- SPACING EIGHT FEET MAXIMUM IS FENCE IS SUPPORTED BY WIRE MESH FENCING, SIX FEET MAXIMUM FOR EXTRA-STRENGTH FABRIC WITHOUT WIRE BACKING.

INSTALLATION

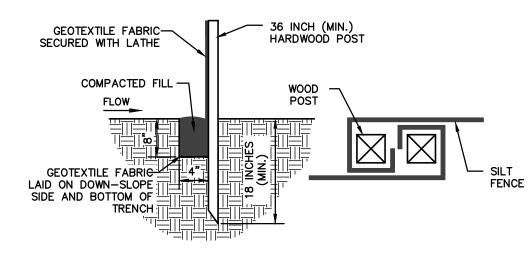
1. LAY OUT THE LOCATION OF THE FENCE SO THAT IS IS PARALLEL TO THE CONTOUR OF THE SLOPE AND AT LEAST 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A SEDIMENT STORAGE AREA. TURN THE ENDS OF THE FENCE UP SLOPE SUCH THAT THE POINT OF CONTACT BETWEEN THE GROUND AND THE BOTTOM OF THE FENCE END TERMINATES AT A HIGHER ELEVATION THAN THE TOP OF THE FENCE AT ITS LOWEST

- 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 OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN-SLOPE SIDE OF
- . DRIVE THE SUPPORT POSTS AT LEAST 18 INCHES INTO THE GROUND, TIGHTLY STRETCHING THE FABRIC BETWEEN THE POSTS AS EACH IS DRIVEN INTO THE SOIL. A MINIMUM OF 12 INCHES OF THE FILTER FABRIC SHOULD EXTEND INTO THE TRENCH. (IF IT IS NECESSARY TO JOIN THE ENDS OF TWO FENCES, USE THE JOINT METHOD SHOWN. 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 FABRIC TO THE SUPPORT POSTS (REFER TO TABLES 1 AND 2 FOR SPACING AND GEOTEXTILE SPECIFICATIONS) AND ATTACH WOODEN LATHE TO SECURE THE FABRIC TO THE POSTS. ALLOW FOR AT LEAST 12 INCHES OF FABRIC BELOW GROUND LEVEL. COMPLETE THE SILT FENCE INSTALLATION, FOLLOWING STEPS 1 THROUGH 6 ABOVE.

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

- IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES
- INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.
- REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE FILTER FABRIC TO BULGE OR WHEN IT REACHES ON-HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND



NOTE: SILT FENCE <u>IS NOT</u> RECOMMENDED FOR USE AS A DIVERSION AND SHOULD NOT BE USED ACROSS A STREAM, CHANNEL, DITCH, SWALE, OR ANYWHERE THAT CONCENTRATED FLOW IS ANTICIPATED.

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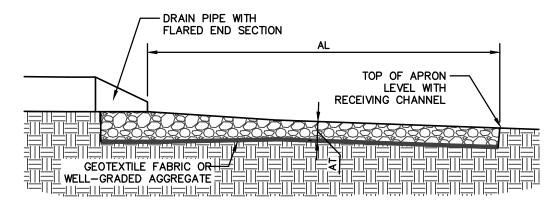
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**STRUCTUREPOINT** 



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

AT = APRON THICKNESS (FEET)

NOTE: AW IS THE APRON WIDTH AT THE NARROW END OF THE APRON.

### SPECIFICATIONS CAPACITY

 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.

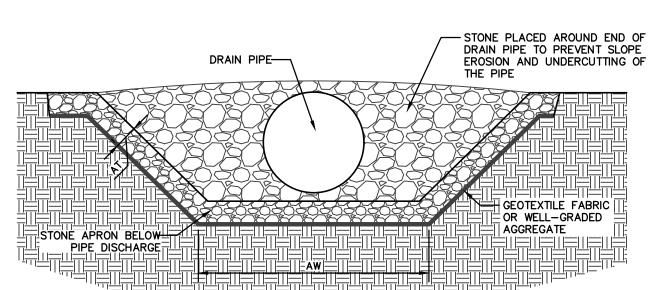
· ALIGNED STRAIGHT WITH CHANNEL FLOW. IF A CURVE IS NECESSARY TO ALIGN THE APRON WITH THE RECEIVING STREAM, LOCATE THE CURVE IN THE UPSTREAM SECTION OF THE APRON. 1.2 TIMES THE MAXIMUM STONE DIAMETER FOR A d<sub>50</sub>STONE SIZE OF 15 INCHES OR LARGER.
 1.5 TIMES THE MAXIMUM STONE DIAMETER FOR A d<sub>50</sub>STONE SIZE OF 15 INCHES OR LESS.

### TABLE 1. SIZING FOR FLOW DISSIPATERS AT CULVERT PIPE OUTLETS

| PIPE SIZE | MEDIAN RIPRAP<br>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 10 FT.    |
| 15 IN.    | 6 IN. MIN.                | 4 TO 6 FT.   | 6 TO 12 FT.    |
| 18 IN.    | 6 IN. MIN.                | 4 TO 6 FT.   | 8 TO 16 FT.    |
| 21 IN.    | 6 IN. MIN.                | 6 TO 8 FT.   | 8 TO 16 FT.    |
| 24 IN.    | 9 IN. MIN.                | 6 TO 8 FT.   | 12 TO 18 FT.   |
| 30 IN.    | 9 IN. MIN.                | 8 TO 10 FT.  | 14 TO 20 FT.   |
| 36 IN.    | 9 IN. MIN.                | 10 TO 12 FT. | 16 TO 22 FT.   |
| 42 IN.    | 9 IN. MIN.                | 12 TO 14 FT. | 18 TO 24 FT.   |
| 48 IN.    | 12 IN. MIN.               | 12 TO 14 FT. | 18 TO 26 FT.   |
| 54 IN.    | 12 IN. MIN.               | 14 TO 16 FT. | 22 TO 28 FT.   |
| 60 IN.    | 12 IN. MIN.               | 15 TO 17 FT. | 22 TO 32 FT.   |
| 66 IN.    | 12 IN. MIN.               | 17 TO 19 FT. | 24 TO 36 FT.   |
| 72 IN.    | 12 IN. MIN.               | 18 TO 20 FT. | 26 TO 40 FT.   |
| 84 IN.    | 18 IN. MIN.               | 21 TO 23 FT. | 30 TO 44 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

RIPRAP OUTLET PROTECTION



- HARD, ANGULAR, HIGHLY WEATHER RESISTANT.
- SPECIFIC GRAVITY OF AT LEAST 2.5. 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 d<sub>50</sub>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).

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. CHECK FOR PIPING OR UNDERCUTTING; REPAIR IMMEDIATELY.

### 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. 3. APPLY MULCH AND ANCHOR IT IN PLACE.

PLANT OR COVER SEED TO THE DEPTH SHOWN IN TABLE 1.

SEEDING SPECIFICATIONS SEEDBED PREPARATION

DENSITY OF VEGETATIVE COVER

SEEDING FREQUENCY

ANNUAL RYEGRASS

SUDANGRASS

CORN (BROADCAST)

• GRADE AND APPLY SOIL AMENDMENTS.

ABLE 1. SLOPE STEEPNESS RESTRICTIONS

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

TESTS INDICATE ADEQUATE PHOSPHOROUS LEVELS IN THE SOIL PROFILE.

WATER OR COVERED WITH MANUFACTURED EROSION CONTROL BLANKETS.

SEED SPECIES\* RATE PER ACRE PLANTING DEPTH OPTIMUM DATES\*\*
WHEAT OR RYE 150 LBS. 1 TO 1-1/2 INCHES SEPT. 15-OCT. 30

SOIL AMENDMENTS - SELECT MATERIALS AND RATES AS DETERMINED BY A SOIL TEST.

(CONTACT YOUR COUNTY SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE

TESTING SERVICES) OR 400 TO 600 POUNDS OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT. CONSIDER THE USE OF REDUCED PHOSPHOROUS APPLICATION WHERE SOIL

EXTENSION OFFICE FOR ASSISTANCE AND SOIL INFORMATION, INCLUDING AVAILABLE SOIL

SEED - SELECT APPROPRIATE PLANT SPECIES SEED OR SEED MIXTURES ON THE BASIS

1/4 INCH

40 LBS. 1 TO 2 INCHES MAY 1-JUNE 1

35 LBS. 1 TO 2 INCHES MAY 1-JULY 30

60 LBS. 1 TO 2 INCHES APRIL 15-JUNE 1

T) 300 LBS. 1 TO 2 INCHES MAY 11-AUG. 10

35 LBS. 1 TO 2 INCHES MAY 1-JULY 15

PERENNIAL SPECIES MAY BE USED AS A TEMPORARY COVER, ESPECIALLY IF THE AREA TO

SEEDING FAILURE. DATES MAY BE EXTENDED OR SHORTENED BASED ON THE LOCATION OF

A HIGH POTENTIAL FOR FERTILIZER, SEED, AND MULCH TO WASH EXISTS ON STEEP BANKS,

APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR

WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF THE SOIL WITH

. SELECT A SEED SPECIES OR AN APPROPRIATE SEED MIXTURE AND APPLICATION RATE

1. IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL

CONTACT BY FIRMING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER

\*\*SEEDING DONE OUTSIDE THE OPTIMUM SEEDING DATES INCREASES THE CHANCES OF

MULCH ALONE IS AN ACCEPTABLE TEMPORARY COVER AND MAY BE USED IN LIEU OF

TEMPORARY SEEDING, PROVIDED THAT IT IS APPROPRIATELY ANCHORED.

CUTS, AND IN CHANNELS AND AREAS OF CONCENTRATED FLOW.

TEST SOIL TO DETERMINE pH AND NUTRIENT LEVELS.

A DISK OR RAKE OPERATED ACROSS THE SLOPE.

COMPLETING SEED OPERATIONS

1 INCH MARCH 1-APRIL 15

1 TO 2 INCHES MAY 1-JUNE 1

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

• EIGHTY PERCENT OR GREATER OVER THE SOIL SURFACE.

100 LBS.

40 LBS.

BE SEEDED WILL REMAIN IDLE FOR MORE THAN ONE YEAR.

SEEDING MAINTENANCE

• INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN 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.

FASTENING FABRIC).

| TABLE 1. SLOPE :           | STEEPNESS RESTRIC | CTIONS  |
|----------------------------|-------------------|---|
| 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<br>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.

### ANCHORING

| 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,<br>BINDERS, OR SOIL STABILIZERS                       | APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.  |
| NETTING (SYNTHETIC OR<br>BIODEGRADABLE MATERIAL)                            | INSTALL NETTING IMMEDIATELY AFTER APPLYING MULCH. ANCHOR NETTING WITH STAPLES. EDGES OF NETTING STRIPS SHOULD OVERLAP WITH EACH UP-SLOPE STRIP OVERLAPPING FOUR TO SIX INCHES OVER THE ADJACENT DOWN-SLOPE STRIP. BEST SUITED TO SLOPE APPLICATIONS. IN MOST INSTANCES, INSTALLATION DETAILS ARE SITE SPECIFIC, SO MANUFACTURER'S RECOMMENDATIONS SHOULD BE FOLLOWED. |

\*ALL FORMS OF MULCH MUST BE ANCHORED TO PREVENT DISPLACEMENT BY WIND AND/OR WATER.

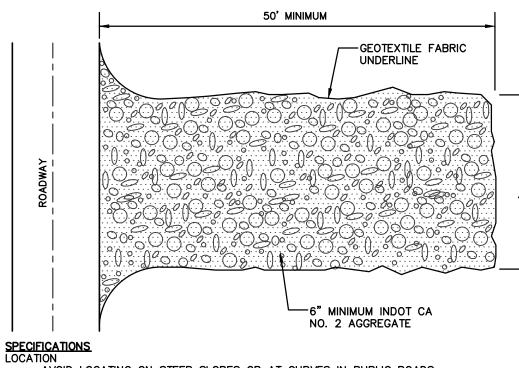
### MULCH APPLICATION 1. APPLY MULCH AT THE RECOMMENDED RATE SHOWN IN TABLE 1.

- 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. 5. ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION. THE MULCH CAN BE ANCHOR STRAW OR HAT MOLETI IMMEDIATELY AFFEIGATION. THE MIGLET CON DE 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. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER SEEDER OR BY BROADCASTING. . 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.



SILT FENCE CONSTRUCTION

NOT TO SCALE

AVOID LOCATING ON STEEP SLOPES OR AT CURVES IN PUBLIC ROADS.

SEASONAL HIGH WATER TABLE LIMITATIONS).

- WIDTH: TWENTY (20) FEET MINIMUM OR FULL WIDTH OF ENTRANCE/EXIT DRIVE, WHICHEVER
- LENGTH: FIFTY (50) FEET MINIMUM OR FULL LENGTH OF DRIVE, WHICHEVER IS GREATER. THICKNESS: SIX (6) INCHES MINIMUM.
- ONE (1) TO TWO AND ONE—HALF (2-1/2) INCH DIAMETER WASHED AGGREGATE (INDOT CA ONE-HALF (1/2) TO ONE AND ONE-HALF (1-1/2) INCH WASHED AGGREGATE (INDOT CA
- NO. 53); OPTIONAL, USED PRIMARILY WHERE THE PURPOSE OF THE PAD IS TO KEEP SOIL FROM ADHERING TO VEHICLE TIRES. GEOTEXTILE FABRIC UNDERLAYMENT (USED AS A SEPARATE LAYER TO PREVENT INTERMIXING OF AGGREGATE AND THE UNDERLYING SOIL MATERIAL AND TO PROVIDE GREATER BEARING STRENGTH WHEN ENCOUNTERING WET CONDITIONS OR SOILS WITH

INSTALLATION
1. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION

GRADE THE FOUNDATION AND CROWN FOR POSITIVE DRAINAGE. INSTALL A CULVERT PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD

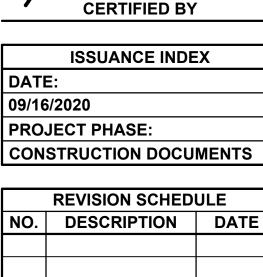
DRAINAGE. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

PLACE AGGREGATE (INDOT CA NO. 2) TO THE DIMENSIONS AND GRADE SHOWN IN THE CONSTRUCTION PLANS, LEAVING THE SURFACE SMOOTH AND SLOPED FOR DRAINAGE. WHERE POSSIBLE, DIVERT ALL STORM WATER RUNOFF AND DRAINAGE FROM THE TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD TO A SEDIMENT TRAP OR BASIN.

RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

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

**GRAVEL CONSTRUCTION ENTRANCE** (SITES LESS THAN TWO ACRES) NOT TO SCALE



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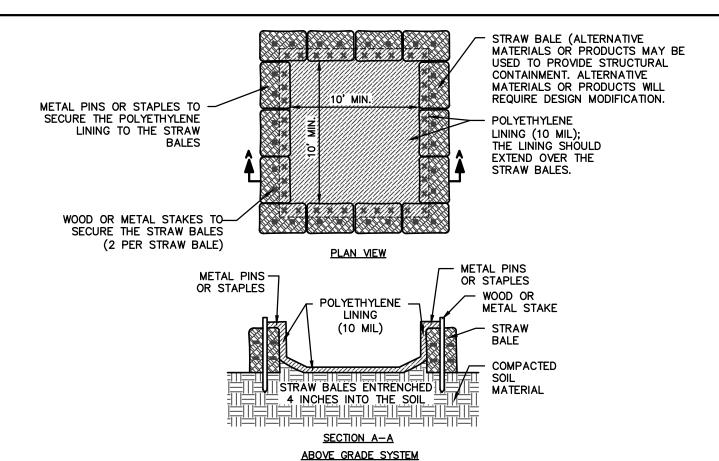
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Project Number 2020.01229

**EROSION CONTROL DETAILS** 

TEMPORARY SEEDING WITH MULCH



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).

- 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 METAL PINS OR STAPLES AT A MINIMUM OF SIX INCHES IN LENGTH, SANDBAGS, OR ALTERNATIVE FASTENER
- TO SECURE POLYETHYLENE LINING TO THE CONTAINMENT SYSTEM. NON-COLLAPSING AND NON-WATER HOLDING COVER FOR USE DURING RAIN EVENTS (OPTIONAL).

### <u>INSTALLATION</u> 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 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 BERM OR CONTAINMENT SYSTEM. THE LINING SHOULD BE SECURED WITH PINS, STAPLES, OR OTHER FASTENERS.
- 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
- INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS.
- POST SIGNS DIRECTING CONTRACTORS AND SUPPLIERS TO DESIGNATED LOCATIONS.

  WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD FOR CONCRETE

### WASHOUT SYSTEMS.

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

- INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.
- INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.
- 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 THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY
- 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 CONTAINMENT SYSTEM OR BASIN FOR FUTURE DEWATERING. 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 APPROPRIATE ACTION.
- WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF 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 STABILIZED.

- COMPLETE CONSTRUCTION/INSTALLATION OF THE SYSTEM AND HAVE WASHOUT LOCATIONS OPERATIONAL PRIOR DO NOT WASH OUT CONCRETE TRUCKS OR EQUIPMENT INTO STORM DRAINS, WETLANDS, STREAMS, RIVERS,
- NEVER WASH OUT INTO A STORM SEWER DRAINAGE SYSTEM. THESE SYSTEMS ARE TYPICALLY CONNECTED TO
- A NATURAL CONVEYANCE SYSTEM.
- 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 TO DISPOSE OF EXCESS CONCRETE OR RESIDUAL LOADS DUE TO THE POTENTIAL TO EXCEED THE DESIGN CAPACITY OF THE WASHOUT SYSTEM. SMALL AMOUNTS OF EXCESS OR RESIDUAL

### SANDBAGS OR OTHER APPROPRIATE ANCHORING SYSTEM TO SECURE THE POLYETHYLENE LINING **EXCAVATION** PLAN VIEW SANDBAGS OR OTHER-APPROPRIATE ANCHORING SYSTEM TO SECURE THE POLYETHYLENE LINING POLYETHYLENE -LINING (10 MIL)

SECTION A-A BELOW GRADE SYSTEM

INSTALL SIGNAGE IDENTIFYING THE LOCATION OF CONCRETE WASHOUT SYSTEMS.

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.

- LOCATE CONCRETE WASHOUT SYSTEMS AT LEAST 50 FEET FROM ANY CREEKS, WETLANDS, DITCHEST, KARST FEATURES, OR STORM DRAINS/MANMADE CONVEYANCE SYSTEMS.
- 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
- LOCATE AWAY FROM OTHER CONSTRUCTION TRAFFIC TO REDUCE THE POTENTIAL FOR DAMAGE TO THE SYSTEM.
- GENERAL DESIGN CONSIDERATIONS THE STRUCTURE OR SYSTEM SHALL BE DESIGNED TO CONTAIN THE ANTICIPATED WASHOUT WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- THE SYSTEM SHALL BE DESIGNED, TO THE EXTENT PRACTICAL, TO ELIMINATE RUNOFF FROM ENTERING THE 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 CONCRETE DISPOSAL. 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.

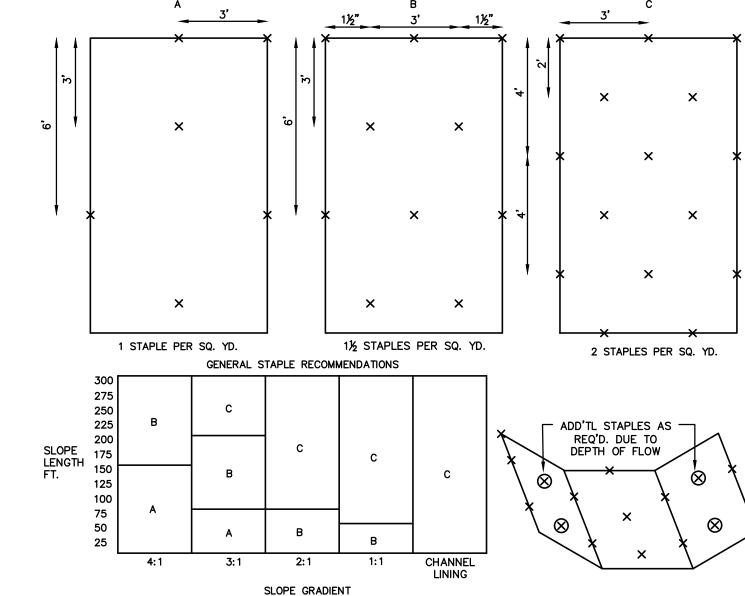
DESIGNED AND INSTALLED UNITS THESE UNITS ARE DESIGNED AND INSTALLED ON SITE. THEY TEND TO BE LESS RELIABLE THAN PREFABRICATED SYSTEMS ARE OFTEN PRONE TO FAILURE. CONCRETE WASHOUT SYSTEMS CAN BE CONSTRUCTED ABOVE OR BELOW GRADE. IT IS NOT UNCOMMON TO HAVE A SYSTEM THAT IS PARTLY BELOW GRADE WITH AN ADDITIONAL

- 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. BELOW GRADE SYSTEM 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
- LINE THE PIT WITH TEN MIL 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.
- DO NOT LEAVE EXCESS MUD IN THE CHUTES OR HOPPER AFTER THE POUR. EVERY EFFORT SHOULD BE MADE. TO EMPTY THE CHUTES 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

### CONCRETE WASH OUT

**EROSION CONTROL BLANKET** 



**MATERIALS** 

. THE FUNCTIONAL LIFE OF AN EROSION CONTROL BLANKET IS DEPENDENT ON THE MATERIALS USED.

- STAPLES, PINS OR STAKES USED TO PREVENT MOVEMENT OR DISPLACEMENT OF BLANKET. (FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC APPLICATIONS.)
- ORGANIC (STRAW, EXCELSIOR, WOVEN PAPER, COCONUT FIBER, ETC.) OR SYNTHETIC MULCH INCORPORATED WITH A POLYPROPYLENE, NATURAL FIBER OR SIMILAR NETTING MATERIAL. (THE NETTING MAY BE BIODEGRADABLE, PHOTODEGRADABLE OR PERMANENT.)

### NOTE: SOME EROSION CONTROL BLANKET NETTINGS MAY POSE A THREAT TO CERTAIN SPECIES OF WILDLIFE IF THEY BECOME ENTANGLED IN THE NETTING

### • SIX TO 12-INCH STAPLES, PINS, OR STAKES.

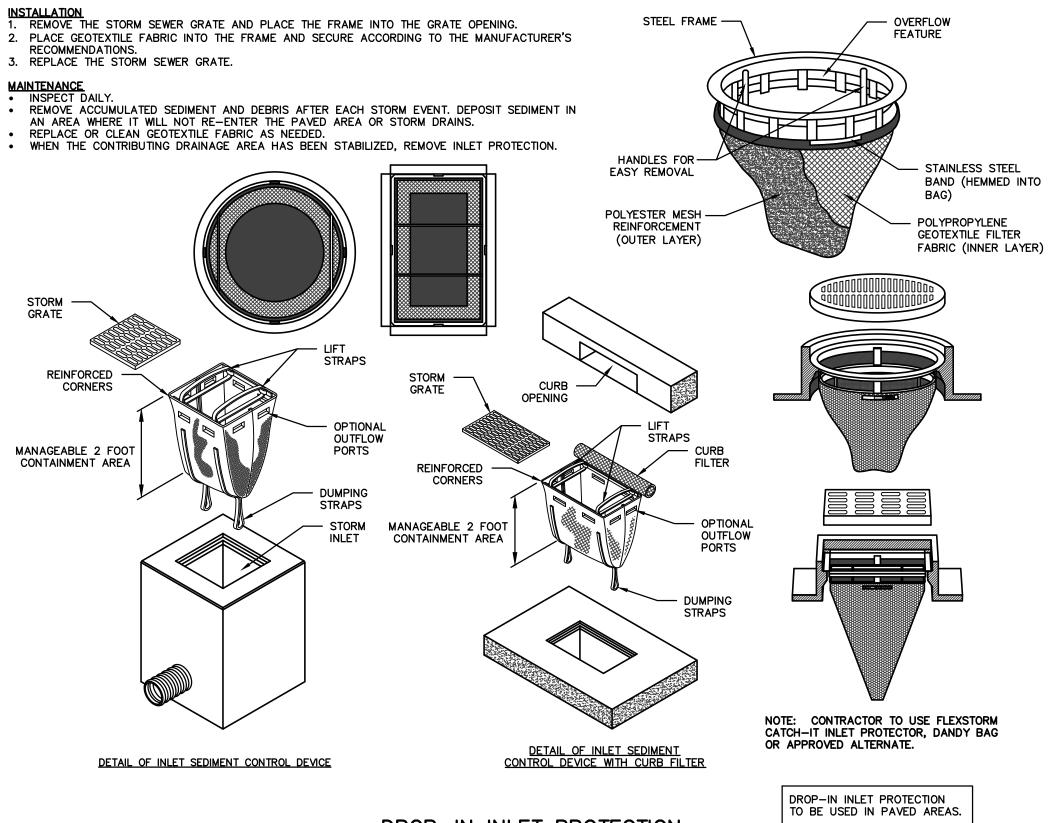
SELECT THE TYPE AND WEIGHT OF EROSION CONTROL BLANKET TO FIT THE SITE CONDITIONS (E.G., SLOPE, CHANNEL, FLOW VELOCITY) PER THE MANUFACTURER'S RECOMMENDATIONS. PREPARE THE SEEDBED, ADD SOIL AMENDMENTS, AND PERMANENTLY SEED THE AREA IMMEDIATELY

. LAY EROSION CONTROL BLANKETS ON THE SEEDED AREA SO THAT THEY ARE IN CONTINUOUS CONTACT

- WITH THE SOIL WITH EACH UP-SLOPE OR UP-STREAM BLANKET OVERLAPPING THE DOWN-SLOPE OR DOWN-STREAM BLANKET BY AT LEAST EIGHT INCHES, OR FOLLOW MANUFACTURER'S RECOMMENDATIONS. 4. TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN. IN CERTAIN APPLICATIONS, THE MANUFACTURER MAY REQUIRE ADDITIONAL CHECK SLOTS AT SPECIFIC LOCATIONS DOWN SLOPE FROM THE UPPERMOST EDGE OF THE UPPER
- 5. ANCHOR THE BLANKETS IN PLACE BY DRIVING STAPLES, PINS, OR STAKES THROUGH THE BLANKET AND INTO THE UNDERLYING SOIL. FOLLOW AN ANCHORING PATTERN APPROPRIATE FOR THE SITE CONDITIONS AND AS RECOMMENDED BY THE MANUFACTURER.
- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.

CHANNEL LININGS UTILIZE STAPLE PATTERN "C" WITH ADDITIONAL STAPLES ON SIDE SLOPES AT PROJECTED WATER LINE.

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE RAINFALL. AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.



DROP-IN INLET PROTECTION

**SPECIFICATIONS** 

EFFECTIVE LIFE

SUPPORT POSTS

STAPLES OR NAILS.

GEOTEXTILE FABRIC.

PHYSICAL PROPERTY

FILTERING EFFICIENCY

ŠTABILIZERS TO ENSURE

SIX MONTH MINIMUM LIFE

AT TEMPERATURES 0° TO

STANDARD STRENGTH

UV RESISTANCE

20% ELONGATION

SLURRY FLOW RATE

WATER FLOW RATE

CONTRIBUTING DRAINAGE AREA

• ONE ACRE MAXIMUM.

• SIX MONTHS (MAXIMUM).

DRAIN WITHOUT BYPASS FLOW.

COLLAPSING OR WITHSTANDING.

•• 2 x 2 INCH OR 2 x4 INCH HARDWOOD POSTS.

THREE FEET LENGTH, MINIMUM.

NOTE: ALTERNATIVE SUPPORT SYSTEMS MAY BE SUBSTITUTED FOR HARDWOOD

RUNOFF FROM A TWO-YEAR FREQUENCY, 24—HOUR STORM EVENT ENTERING A STORM

(STRUCTURE MUST WITHSTAND 11/2-FOOT HEAD OF WATER AND SEDIMENT WITHOUT

• HEIGHT - 12 TO 18 INCHES, MEASURED FROM THE TOP OF STORM DRAIN INLET.

GEOTEXTILE FABRIC

85%

30 LBS. PER LINEAL INCH

50 LBS. PER LINEAL INCH

15 GAL./MIN./SQUARE FOOT | 220 GAL./MIN./SQUARE FOOT

0.3 GAL./MIN./SQUARE FOOT

36 IN. (MAX.)

BURIED GEOTEXTILE

GEOTEXTILE FABRIC

85%

85%

50 LBS. PER LINEAL INCH

70 LBS. PER LINEAL INCH

PROVIDE CROSS BRACING

WHEN NECESSARY

4.5 GAL./MIN./SQUARE FOOT

• FRAME SUPPORT - BRACING TO STRENGTHEN INTEGRITY OF THE STRUCTURE.

POST SPACING - 36-INCH MAXIMUM SPACING BETWEEN POSTS.

• 1 x 2 INCH OR 1 x 3 INCH HARDWOOD CROSS BRACING LUMBER.

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

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

. 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).

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.

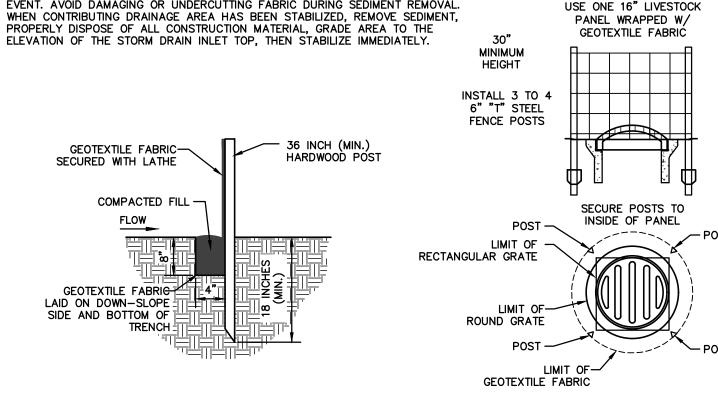
BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE. BRACE THE POSTS BY NAILING BRACES INTO EACH CORNER POST OR UTILIZE RIGID PANELS TO SUPPORT FABRIC.

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, AND /OR

USE IN CONJUNCTION WITH EXCAVATED DROP INLET PROTECTION.

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



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

SILT FENCE INLET PROTECTION

### Zaxby's

1792 N. Riley Hwy Shelbyville, IN 46176

Barred Rock, Inc.

d/b/a Zaxby's

**Circle City Rentals, LLC** 

d/b/a Aaron's

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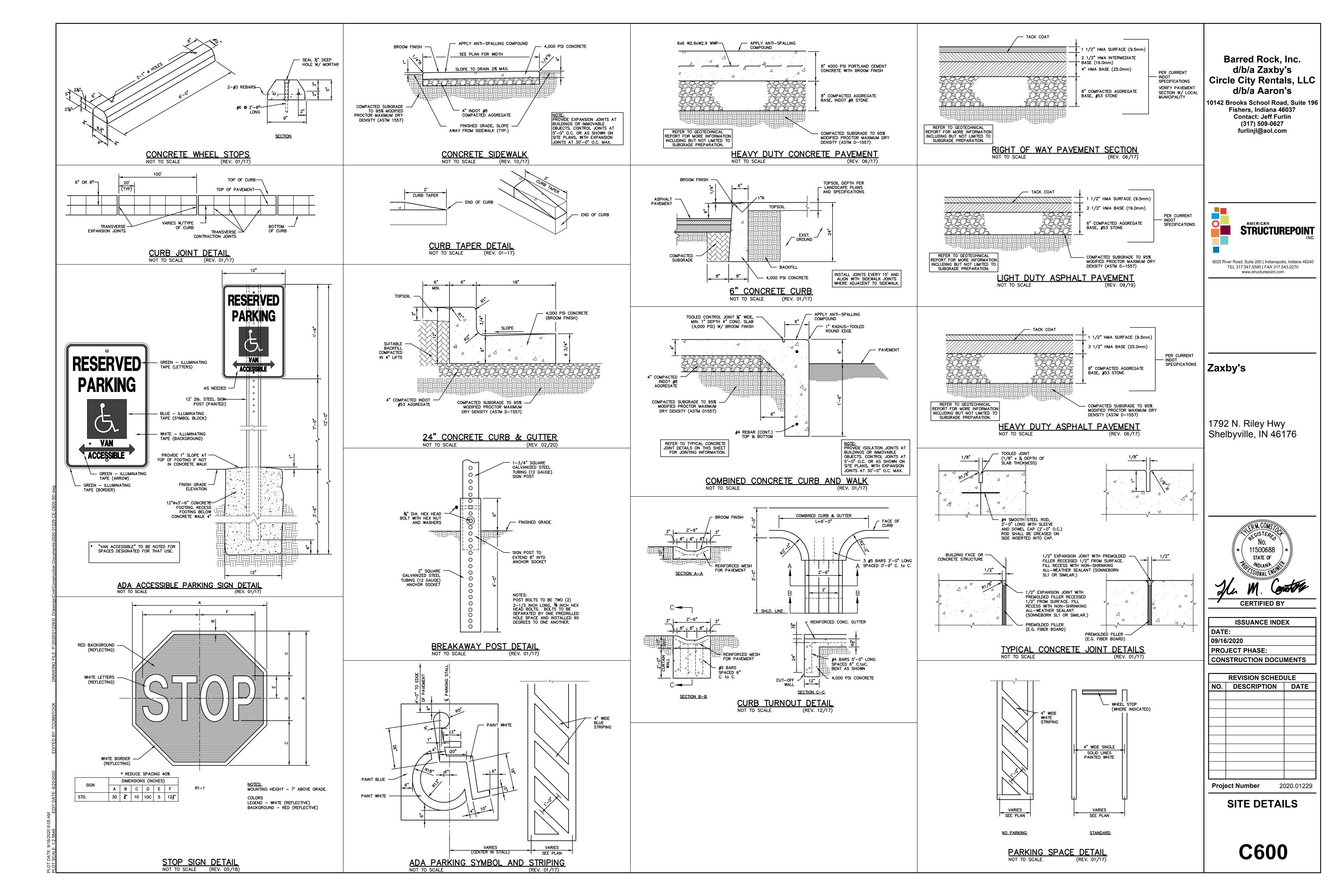
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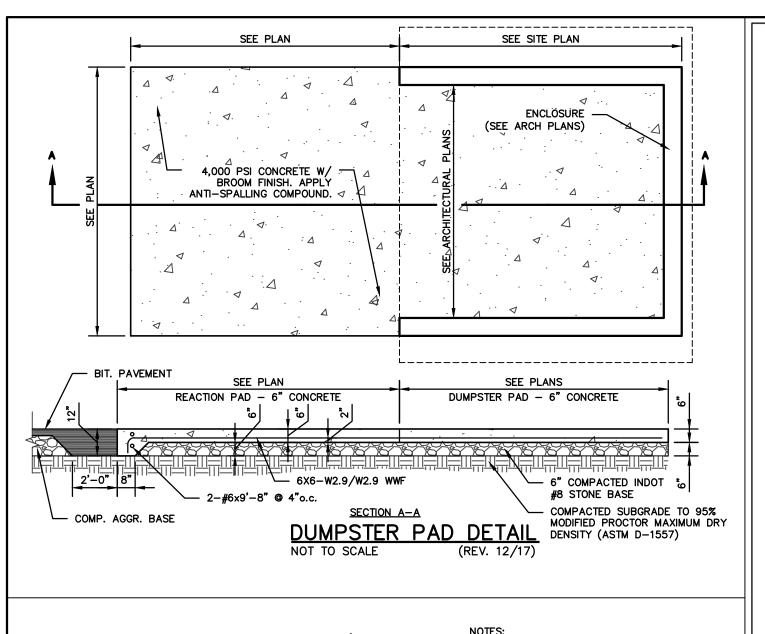


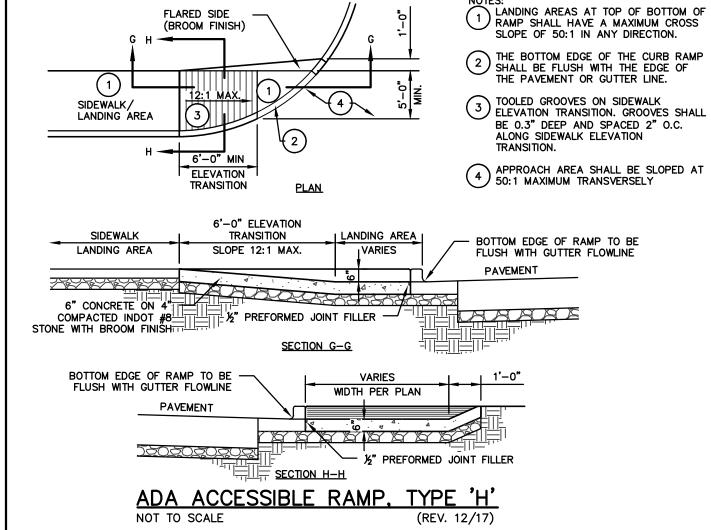
**ISSUANCE INDEX** DATE: 09/16/2020 PROJECT PHASE: CONSTRUCTION DOCUMENTS

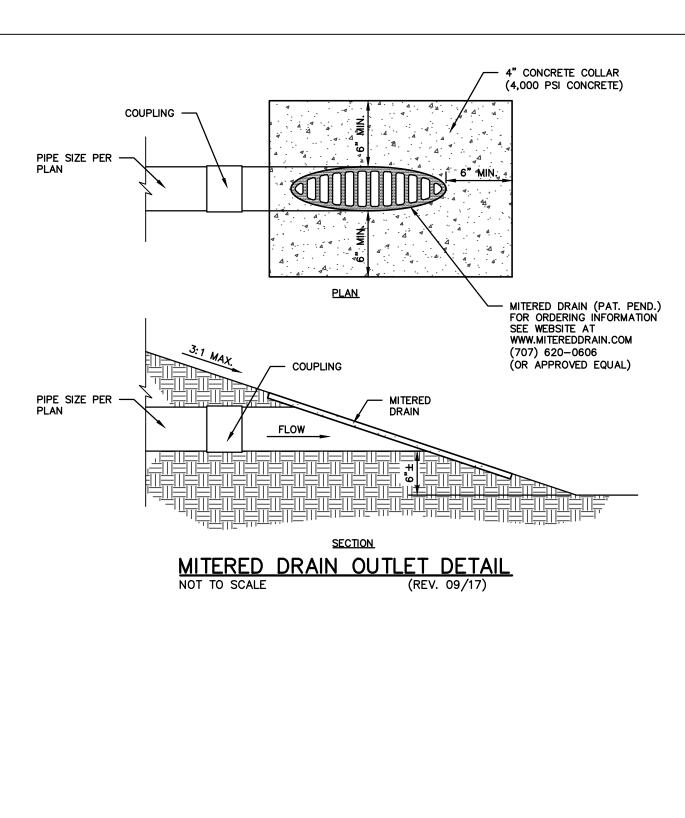
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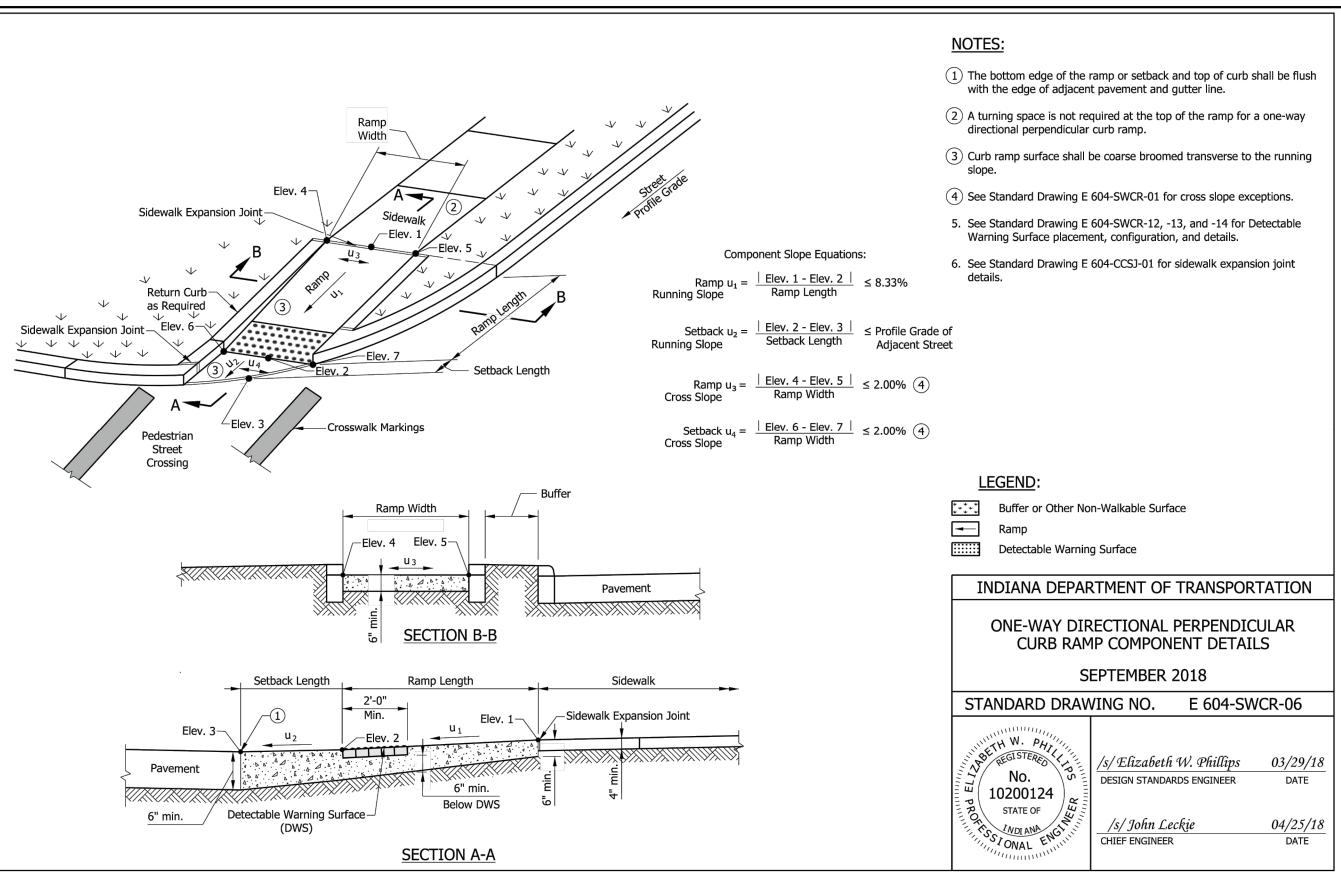
**EROSION CONTROL DETAILS** 

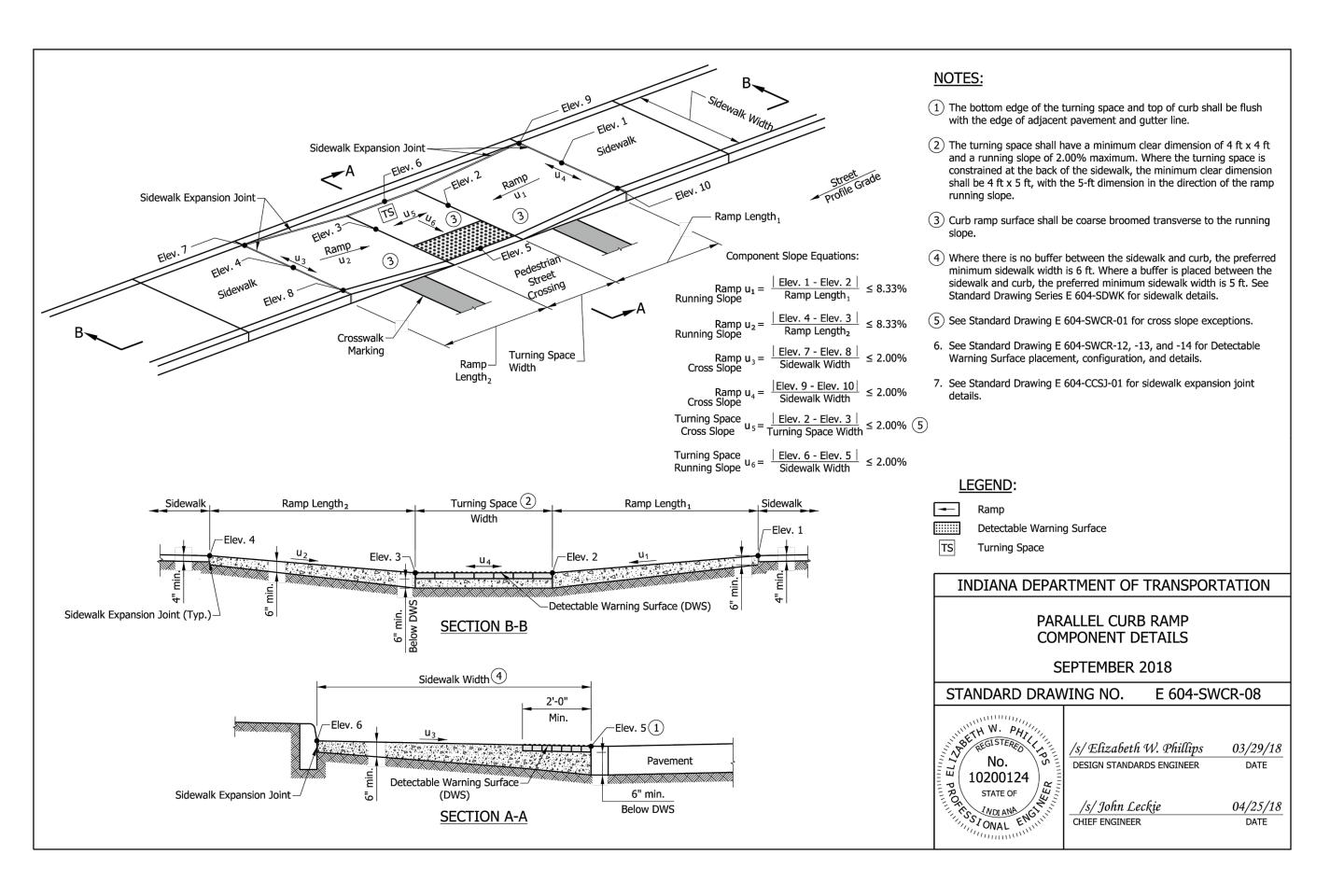












### Barred Rock, Inc. d/b/a Zaxby's Circle City Rentals, LLC d/b/a Aaron's

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### Zaxby's

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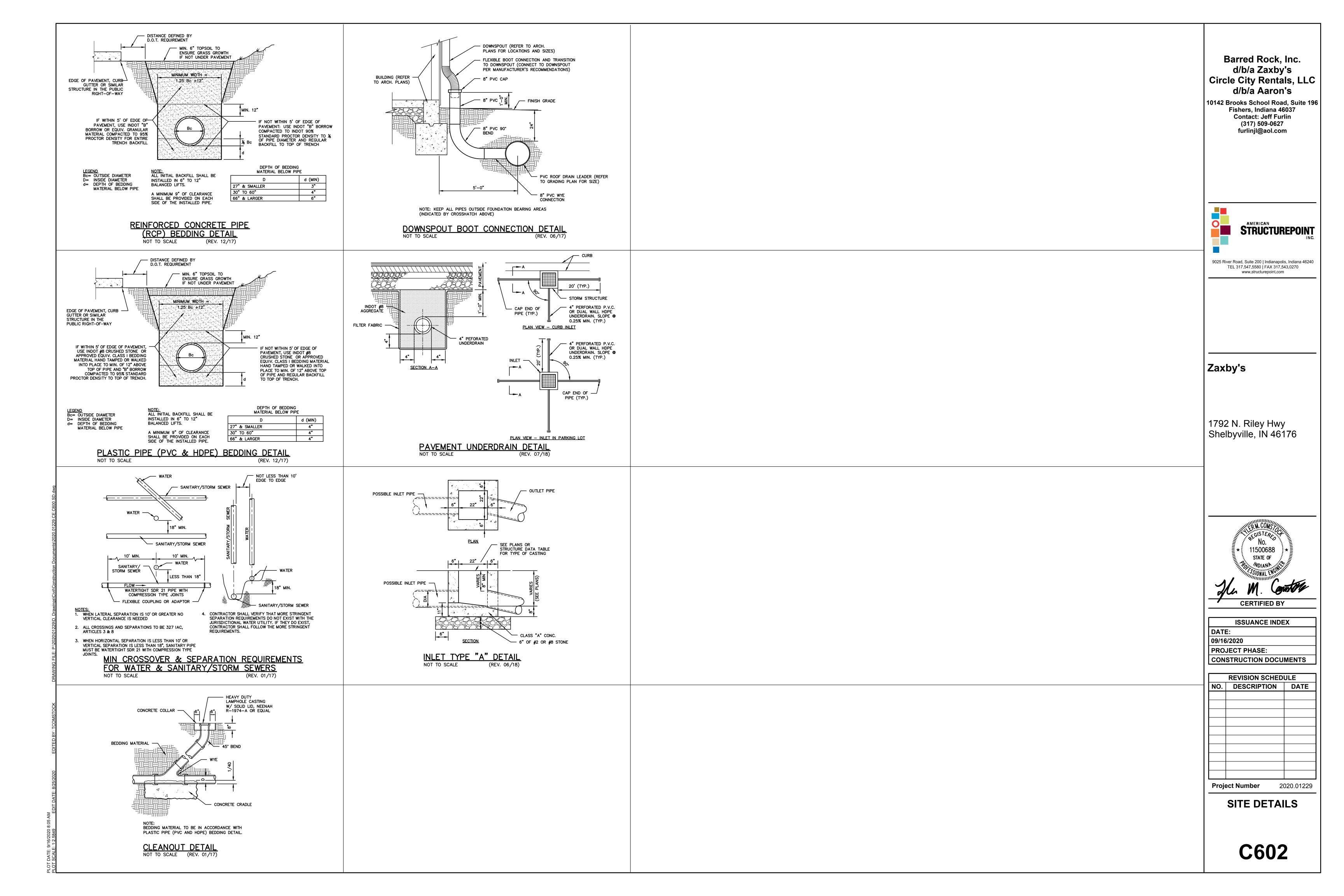


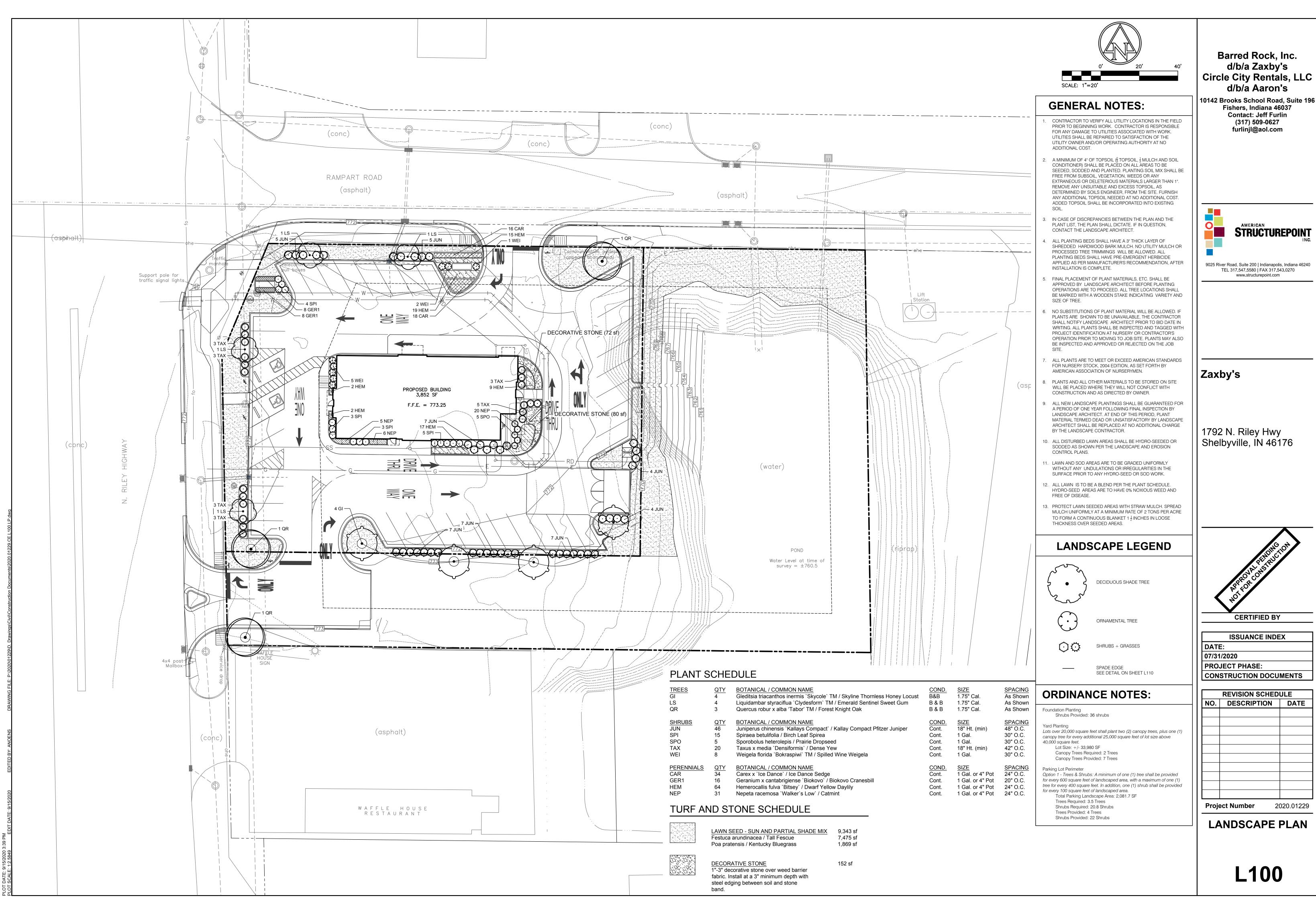
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SITE DETAILS

C601







LAWN AREA PLANTING OR MULCHED AREA MULCH PER PLAN NOTE: SPADE EDGE DETAIL SHALL BE USED AT ALL (SEE GENERAL NOTES) LAWN EDGES & AT EDGES OF MULCHED AREAS (FOR VERTICAL EDGE CONTAINMENT) EXISTING GRADE OR GRADE OF PLANTING AREA SPADE EDGE SHALL CREATE A CLEAN SEPARATION BETWEEN AREAS; AND SHALL CREATE SMOOTH & EVEN LINES (AS INDICATED ON THE PLANS)

**03** SPADE EDGE DETAIL

TREE PLANTING DETAIL

### Barred Rock, Inc. d/b/a Zaxby's Circle City Rentals, LLC d/b/a Aaron's

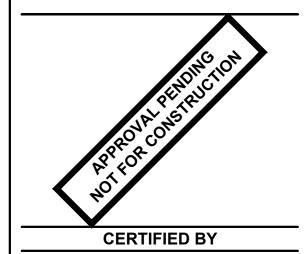
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### Zaxby's

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REVISION SCHEDULE NO. DESCRIPTION DATE 2020.01229 Project Number

> LANDSCAPE **DETAILS**

> > L110

BED WIDTH 24" U.N.O. 24" U.N.O. —SHRUB (PER PLAN) -NOTE: CROWN BED 2-3" ABOVE FINISH GRADE. TOP OF ROOTBALL TO BE A MIN. OF 2" ABOVE FINISH GRADE. -----3" MULCH LAYER (SEE GENERAL NOTES) PLANTING SOIL MIX (SEE GENERAL NOTES) BED WIDTH FINISH -GRADE PLAN NOTE: BREAK THROUGH ANY EXISTING "HARD-PAN" AND REMOVE AS NECESSARY TO PROVIDE GOOD PERCOLATION AND SECTION UNDISTURBED SOIL POSITIVE DRAINAGE. PLANTING PROCEDURE

> 1. LAYOUT BED AND OUTLINE WITH SPADE EDGE. PLACE SOIL FROM SPADE EDGE WITHIN BED.

POCKETS TO FORM WHEN BACKFILLING.

2. ROTOTILL BED TO A 12" MIN. DEPTH OR AS REQUIRED FOR SPECIFIED SHRUBS. REMOVE EXISTING SOIL AS REQUIRED. SPREAD 6" MIN. LAYER OF PLANTING SOIL MIX OVER BED. ROTOTILL PLANTING SOIL MIX INTO TOP OF BED. 3. INSTALL PLANTS, MULCH AND WATER THOROUGHLY. DO NOT ALLOW AIR

02 SHRUB PLANTING DETAIL

L110 SCALE: NTS

PLANT 30" — FROM CURB

AS NEEDED

ROOT BALL—

GENERAL NOTES:

1. SEE SPECIFICATIONS FOR DRAINAGE KEEP MULCH OFF TRUNK OF TREE REQUIREMENTS PROIR TO PLANTING. 2. DO NOT ALLOW AIR POCKETS TO REMOVE ALL ROPE, CANVAS, AND WIRE FORM WHEN BACKFILLING. BASKET FROM TOP 1/3 OF ROOTBALL 3. IMMEDIATELY SOAK WITH WATER. ---- 1-1/2" MULCH LAYER 4. DO NOT BREAK ROOTBALL. ----- EARTH SAUCER 3" MULCH LAYER (SEE GENERAL NOTES) SPADE EDGE PLANTING SOIL MIX — FINISHED GRADE (SEE GENERAL NOTES)

PLANTING PROCEDURE

ADD EXCAVATED SOIL AS NEEDED TO BRING TREE

TO FINISHED GRADE. TAMP

LIGHTLY BUT THOROUGHLY

PRIOR TO SETTING TREE

TO PREVENT SETTLING.

1. EXCAVATE ROOTBALL PIT 2. ADD EXCAVATED SOIL & TAMP. SET TREE SUCH THAT TOP OF ROOTBALL IS 2-3" HIGHER THAN FINISHED GRADE.

3. BACKFILL WITH SOIL MIX & "WATER IN"

4. COMPLETE BACKFILLING, CONSTRUCT SAUCER, SPADE EDGE & ADD MULCH 5. STAKE & GUY SECURELY (AS REQUIRED) SCARIFY BASE OF PLANT PIT WHEN EXCAVATING PIT.

BREAK THROUGH & LOOSEN

ALL "HARDPAN" (REMOVE AS

NECESSARY TO FACILITATE

DRAINAGE)

L110 SCALE: NTS

### EXTERIOR FINISH SCHEDULE

ALL MATERIALS & INSTALLATION SHALL CONFORM TO APPLICABLE ASTM STANDARDS UNLESS GOVERNING AUTHORITIES HAVE DIFFERENT REQUIREMENTS.

STANDARD BRICK UNIT 3 5/8" x 2 1/4" x 7 5/8" RUNNING BOND

1 COLOR: BRICK - COMMONWEALTH (GENERAL SHALE) APPROVED ALTERNATE - M/S CHEROKEE NATCHEZ (CHEROKEE BRICK) APPROVED ALTERNATE - OLDE COLUMBIA (BORAL BRICK) MORTAR - "ANTIQUE BUFF" (COOSA)

3/8" THICK MORTAR JOINTS. ASTM C-270, TYPE N.

15# ROOFING FELT OVER ALL SUBSTRATES OR SEALED DENS GLASS GOLD SHEATHING GROUT VOID SOLID @ FENCE AND BELOW F.F. PROVIDE VAPOR BARRIER AS INDICATED.

CONTINUOUS, THROUGH WALL FLASHING, EPDM (BY W.R. GRACE) OR EQUAL, AT BOTTOM OF WALLS & ABOVE OPENINGS. CUT FLASHING FLUSH WITH EXT. FACE. PROVIDE CELL VENT TYPE WEEPS, ABOVE FLASHING @ 32" O.C. MAX.

HOHMANN & BARNARD, INC. HORIZ REINF. ON CMU FENCE HOHMANN & BARNARD, INC., DW-10 HS TRIANGULAR MTL. WALL TIES (OR EQUAL) @ 16" O.C. VERT. & AT HORIZ. STUD SPACING, 14 GA. SEE SECTIONS & SPECS. ATTACH TO STUDS WITH (2) 10 - 16 x 1-1/2" SCREWS.

2F = FIELD COLOR: PAINT SHERWIN WILLIAMS "ROYCROFT COPPER RED"/SW 2839 (SATIN FINISH)

HARDIE PLANK- EMBOSSED GRAIN FINISH LAP SIDING WITH 6" EXPOSURE, PAINT FIELD HARDIE PANEL VERTICAL SIDING, BOARD & BATTEN @ 12" O.C., PAINT PANEL & BATTENS PAINT FIELD COLOR

= ACCENT COLOR: HARDIE CORNERS, FREIZE & TRIM - SHERWIN WILLIAMS "BALANCED BEIGE" /SW 7037 (SATIN FINISH)

HARDIE TRIM BOARDS, CORNICE, FRIEZE & TRIM (SMOOTH FINISH)-PAINT SHERWIN WILLIAMS "BALANCED BEIGE" /SW 7037 (SATIN FINISH)

3 FASCIA, RAFTERS, PURLINS AND BRACKETS- PAINT SHERWIN WILLIAMS "BALANCED BEIGE" /SW 7037 (SATIN FINISH)

4 PREFINISHED, METAL COPING OR GRAVEL STOP & ROOFING COLOR: COPINGS: FULL 24 GA GALVANIZED/GALVALUME METAL COPING ONLY DOWNSPOUTS SHOULD BE GALVANIZED/GALVALUME ROOFING @ REAR AWNING: GALVANIZED / GALVALUME MATERIAL SHALL BE 24 GAUGE, HOT DIPPED GALVANIZED STEEL OR

0.032" THICK ALUM. FINISH SHALL BE KYNAR 500 FLUOROCARBON COATING. ACCEPTABLE MANUFACTURES ARE AS FOLLOWS:

A. BERRIDGE MANUF. CO., HOUSTON, TX. B. PAC-CLAD

D. McELROY METAL CO., PEACHTREE CITY, GA. E. APPROVED EQUALS WILL BE ACCEPTED

PROVIDE ALL RELATED ACCESSORIES: FLASHING, END CLOSURES, GUTTERS, DOWNSPOUTS, ETC. IN MATCHING COLOR. INSTALL ALL MATERIALS PER MANUF.'S RECOMMENDATIONS.

A MANUFACTURER'S WARRANTY AGAINST DISCOLORATION & WEATHER-TIGHTNESS WILL BE REQUIRED.

NOT ALL ROOF PENETRATIONS & ACCESSORIES ARE SHOWN ON THIS DRAWING. IT IS THE RESPONSIBILITY OF THE G.C. TO INSTALL ITEMS INDICATED ELSEWHERE.

5 STOREFRONT: WINDOWS & ENTRANCE DOORS (BRITE WHITE - ORSF81275)

ACCEPTABLE MANUFACTURER: KAWNEER, REFER TO SPECIFICATIONS ALL GLAZING SHALL BE IN ACCORDANCE W/ THE FOLLOWING VALUES:

| TYPE          | LOCATION      | TYPE & THICKNESS | U FACTOR | SHGC | VLT | VLR |
|---------------|---------------|------------------|----------|------|-----|-----|
| LOW-E COATING | EXTERIOR SIDE | 1/4" TEMPERED    | 0.40     | 0.30 | 60  | 16  |
| LOW-E COATING | INTERIOR SIDE | 1/4" TEMPERED    |          |      |     |     |

-CUSTOM LOGO TOP CUTOUT OF A 12" MTL. DISK

IN GALVALUME FINISH

BASE FINISH TO

MATCH ROOFING

HEAVY NUT & WASHER

STANDARD WEATHERVANE

WEATHERVANE DIRECTIONALS

WEATHERVANE FINAL PREMAN.

WEATHERVANE FLASHING AS

SUPPLIED BY WEATHERVANE

MANUF. PROVIDE SILICONE

BY WEATHERVANE MANUF.

BY WEATHERVANE MANUF.

INSTALL PRE MANUF.

WASHER AT BASE.

WEATHERVANE DETAIL

RECOMMENDATIONS TO

- USE MANUF. SUPPLIED BRACKETS

& ACCESSORIES AS REQUIRED.

IF REQUIRED USE DOUBLE-NUT &

ALLOW FREE ROTATION OF WEATHERVANE

SEALANT AS RECOMMENCED

MOUNTING BRACKET SUPPLIED

SECURE BRACKET TO UNDERSIDE

OF TRUSSES AS RECOMMENDED BY WEATHERVANE MANUF.

- INSTALL TO ALLOW FREE ROTATION

CONTACT PERSON @ QUALITY GLASS: JOHNNY DOSTER @ 706-548-4481

6 SELF-CLOSING & TEMPERED GLASS DRIVE-THRU WINDOW: ROUGH OPENING = 6'-0" WIDE x 5'-8" HIGH QUICKSERV MODEL SC-4040 SELF CLOSING HORIZ. SLIDER WINDOW FIT INTO A "STOREFRONT" FRAME, MATCH STOREFRONT IN COLOR & GLAZING.

> QUICKSERV-DIVISION OF MCE SYSTEMS CORP. P.O. BOX 40466, HOUSTON, TX 77240-0466 P. 800-388-8307 F. 713-462-1936 STOREFRONT & SLIDER ALSO BY:

QUALITY GLASS P. 706-548-4481

G.C. AND STOREFRONT PROVIDER SHALL BE RESPONSIBLE FOR COORDINATION WITH THE OWNER REGARDING THE DIRECTION OF THE SLIDING WINDOW PRIOR TO ORDERING OR INSTALLING ANY MATERIALS.

7 GALVALUME 22 GA. CORRUGATED FINISH METAL ROOF

(MBCI PBC OR EQUIV.)

8 GALVANIZED METAL FINISH GOOSENECK FIXTURES ARE TO BE INSTALLED BY THE G.

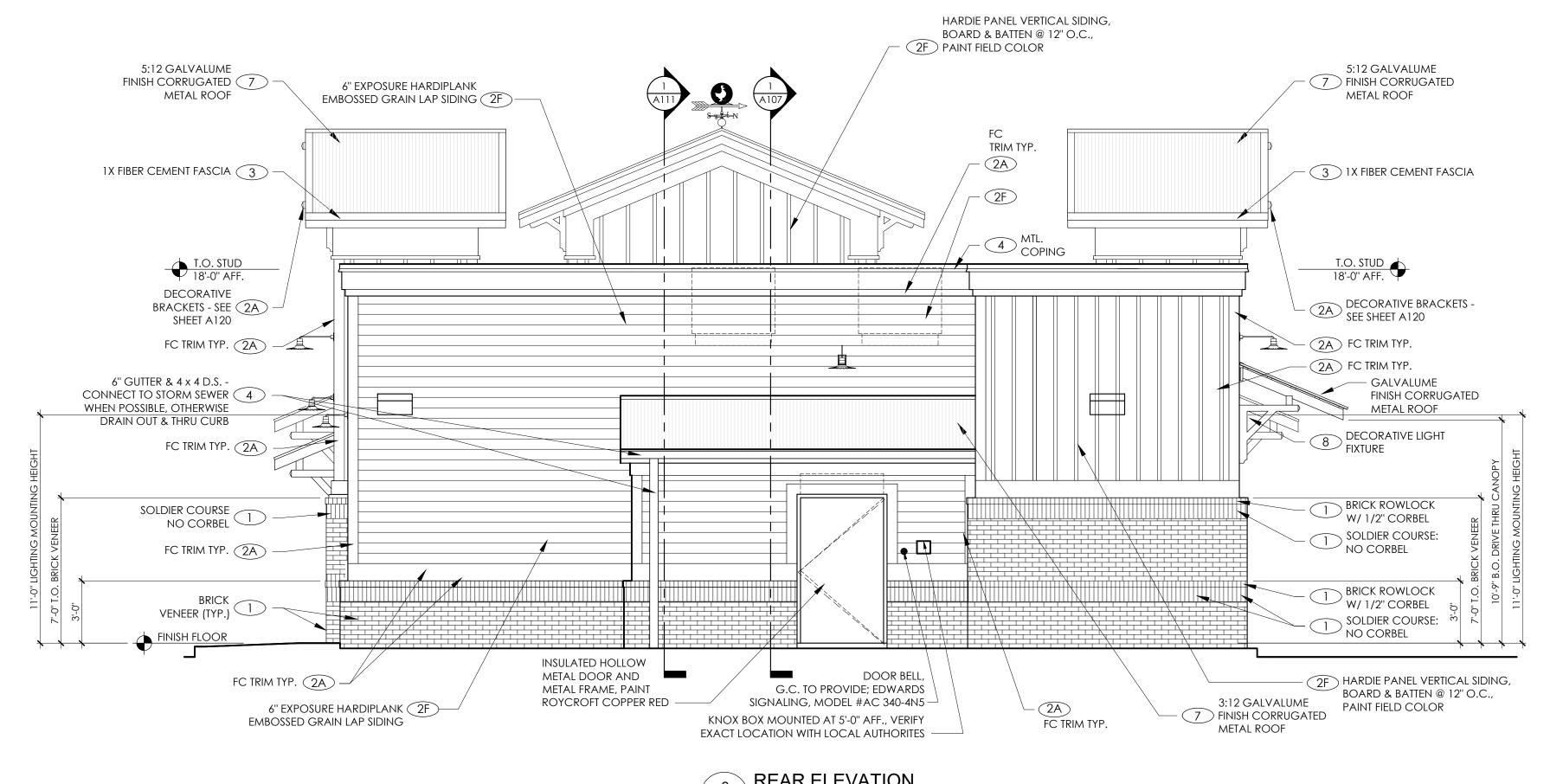
ALL SPECIFIED MATERIALS MUST BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. ANY DISCREPANCIES OR CONFLICTS BETWEEN THE DRAWINGS AND THE MANUFACTURER'S REQUIREMENTS SHOULD BE IDENTIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION AND DURING THE BID PHASE TO AVOID CHANGE ORDERS.

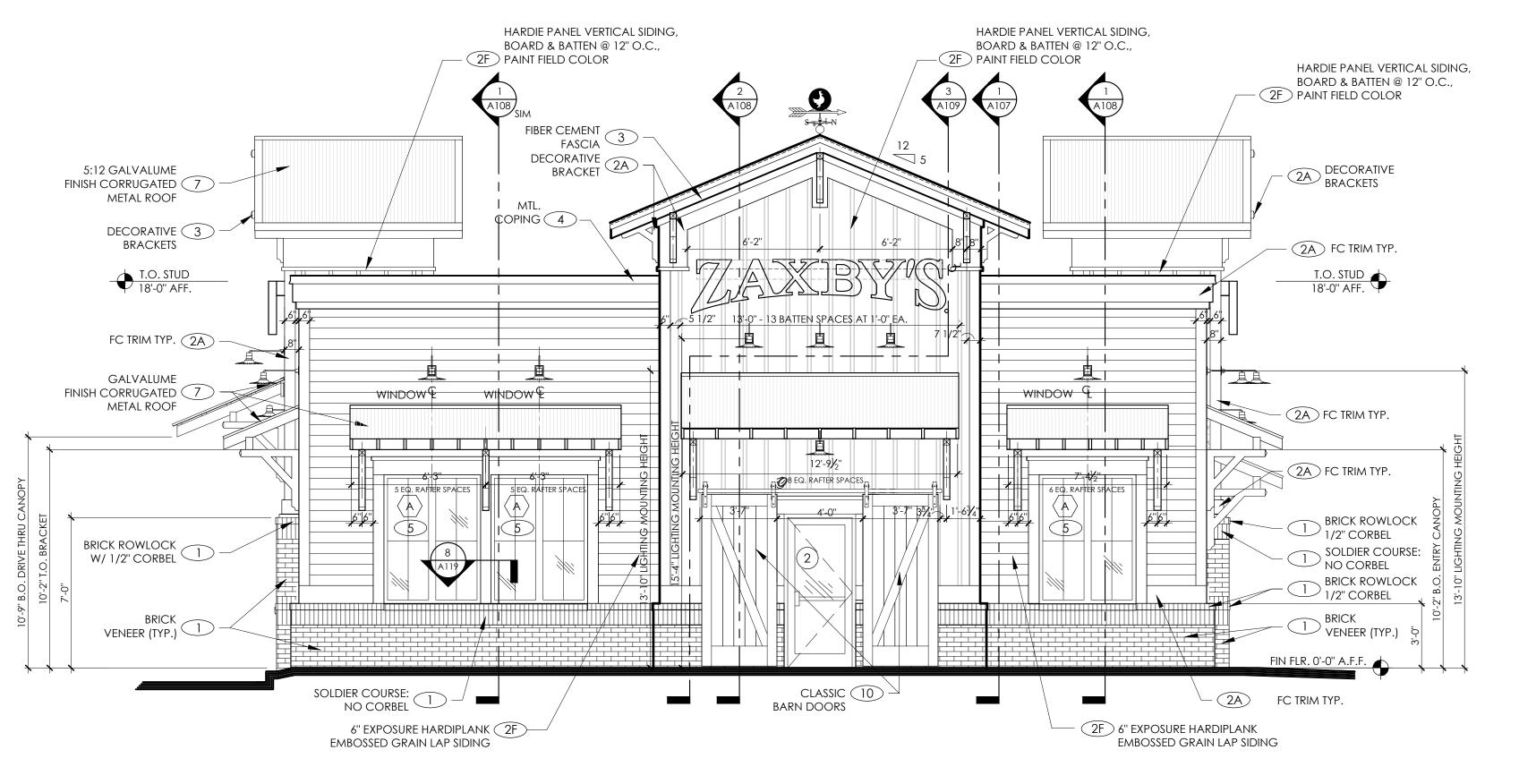
9 INTERIOR LADDER, PAINT BLACK

10 BARN DOORS, PAINT 2F AND TRIM COLOR 2A. HARDWARE TO BE POWDER COATED BLACK, INSTALL PAINTED 6x6 FOR MOUNTING OF THE TRACK.

WINDOW, SEE WINDOW ELEVATIONS

DOOR, SEE DOOR SCHEDULE





ARCHITECT OF RECORD:

423 FISCHER TRAIL

ELLIJAY, GEORGIA 30540

THOMAS E. MORGAN, JR. ARCHITECT

DESIGN GROUP

3450 Acworth Due West Road Building 100, Suite 120 Kennesaw, Georgia 30144 P. 770-917-9172 F. 770-917-9470 www.mrpdesign.com

RELEASED FOR CONSTRUCTION

ISSUES/REVISIONS ATE DESCRIPTION 24-20 FOR PERMIT / CONSTRUCTION

DRAWN BY: CHK'D BY:

PROJECT NAME AND ADDRES

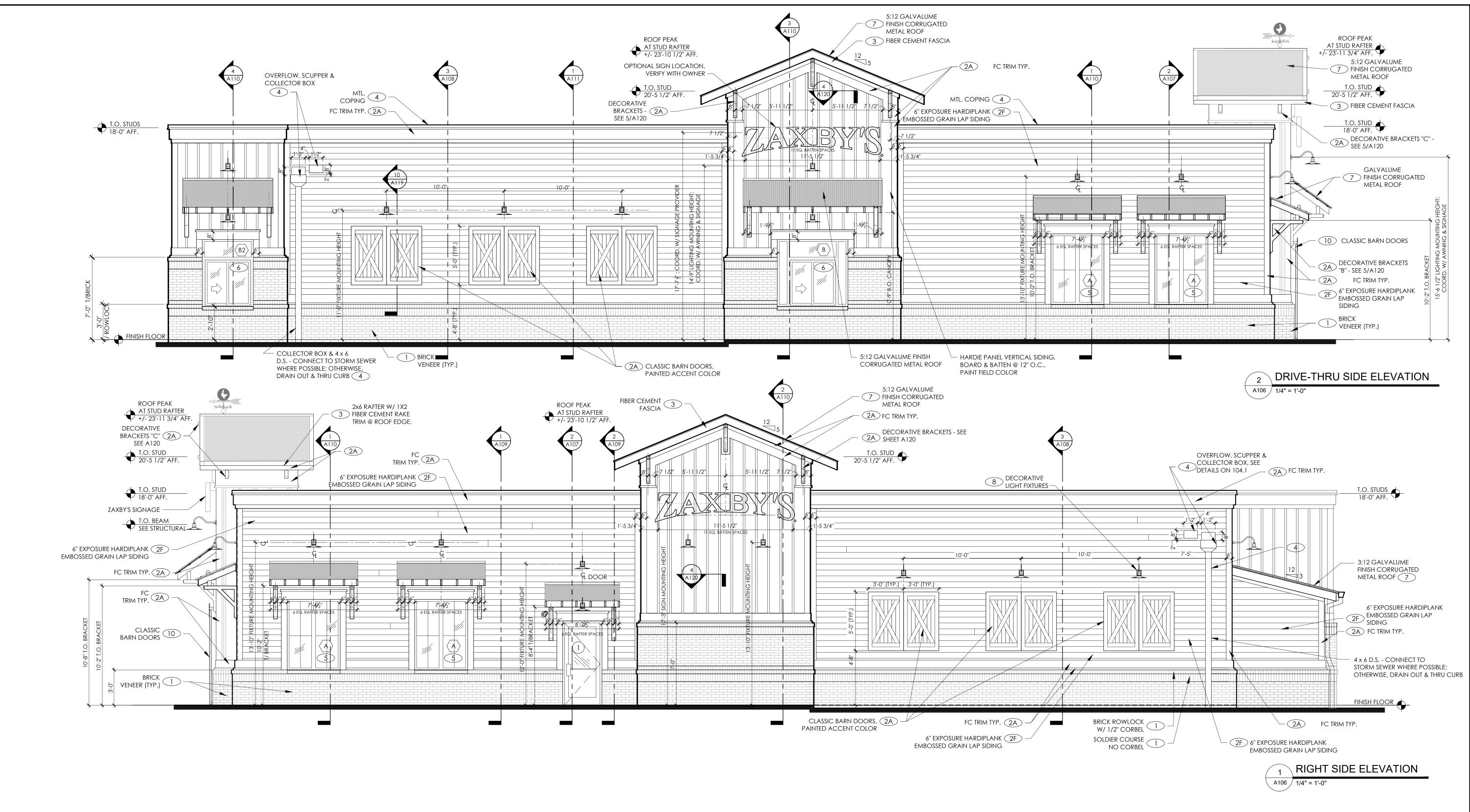


FRONT & REAR EXTERIOR ELEVATIONS

20030

PROJECT NO:

A105



SEE FINISH SCHEDULE AND NOTES ON SHEET A 105

THOMAS E. MORGAN, JR. ARCHITECT

ARCHITECT OF RECORD:

423 FISCHER TRAIL ELLIJAY, GEORGIA 30540



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CHK'D BY:

PROJECT NAME AND ADDRES

SHELBYVILLE, INDIANA

SHEET TITLE

DRIVE THRU & RIGHT EXTERIOR ELEVATIONS

PROJECT NO:

A106