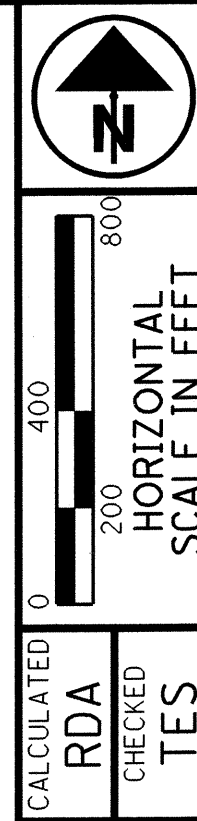
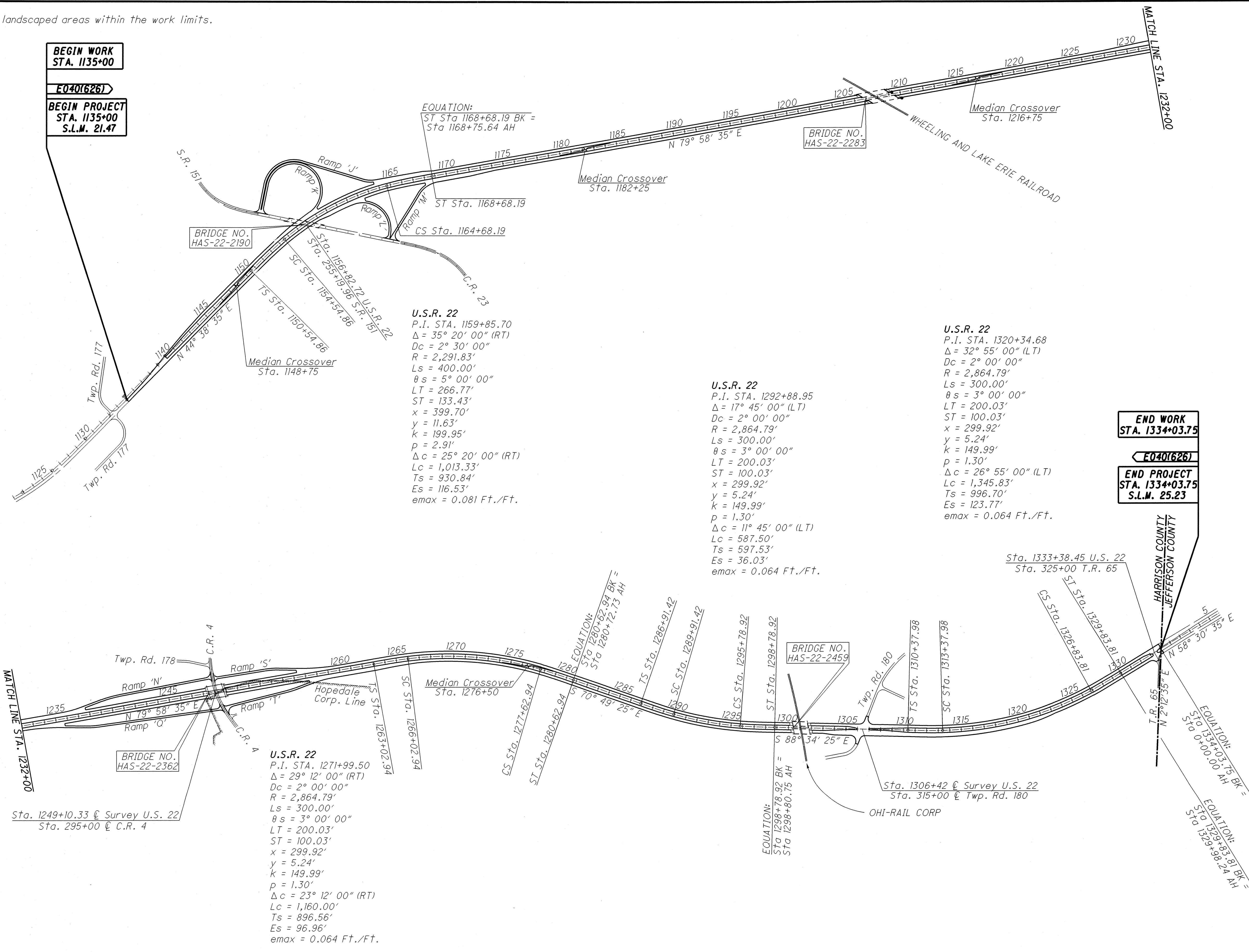


There are no existing landscaped areas within the work limits.



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SCHEMATIC PLAN
STA. 1122+00 to STA. 6+00

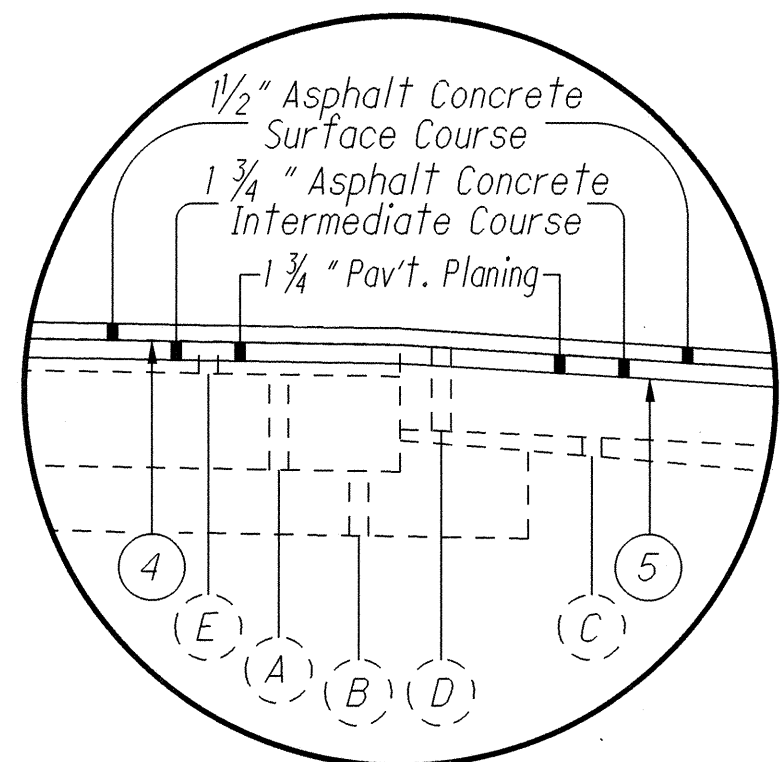
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PROPOSED LEGEND

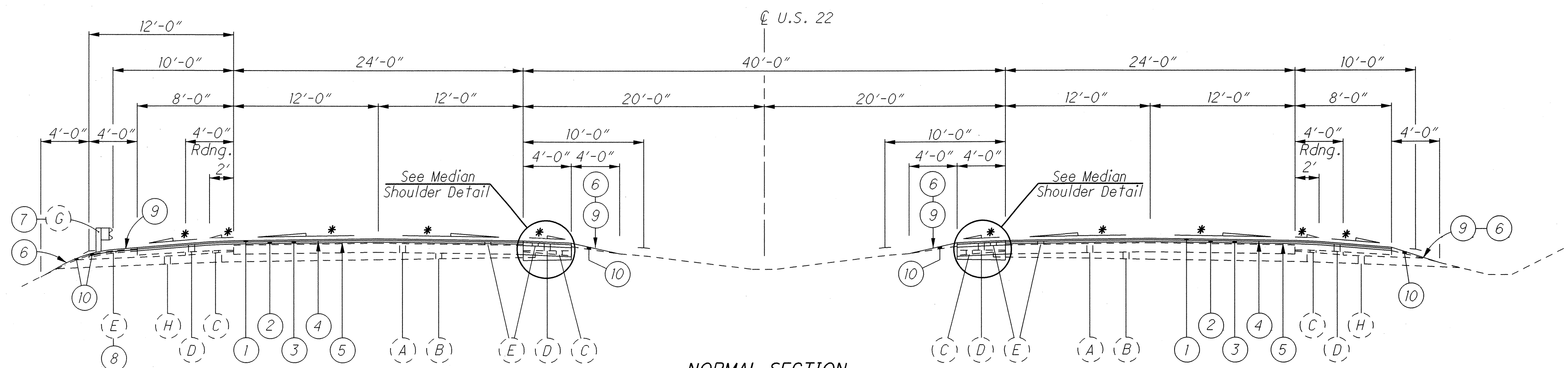
- ① ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN
- ② ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)
- ③ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1 3/4" NOMINAL DEPTH)
- ④ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL./S.Y.)
- ⑤ ITEM 407 - TACK COAT (0.075 GAL./S.Y.)
- ⑥ ITEM 209 - LINEAR GRADING, AS PER PLAN
- ⑦ ITEM 606 - GUARDRAIL, TYPE 5
- ⑧ ITEM 202 - PAVEMENT REMOVED
- ⑨ ITEM 408 - PRIME COAT, AS PER PLAN
- ⑩ ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN
- ⑪ ITEM 302 - ASPHALT CONCRETE BASE, PG64-22
- ⑫ ITEM 304 - AGGREGATE BASE
- ⑬ ITEM 408 - PRIME COAT
- ⑭ ITEM 204 - SUBGRADE COMPACTION



**TYPICAL RESURFACING DETAIL
(MAINLINE & SHOULDER)**

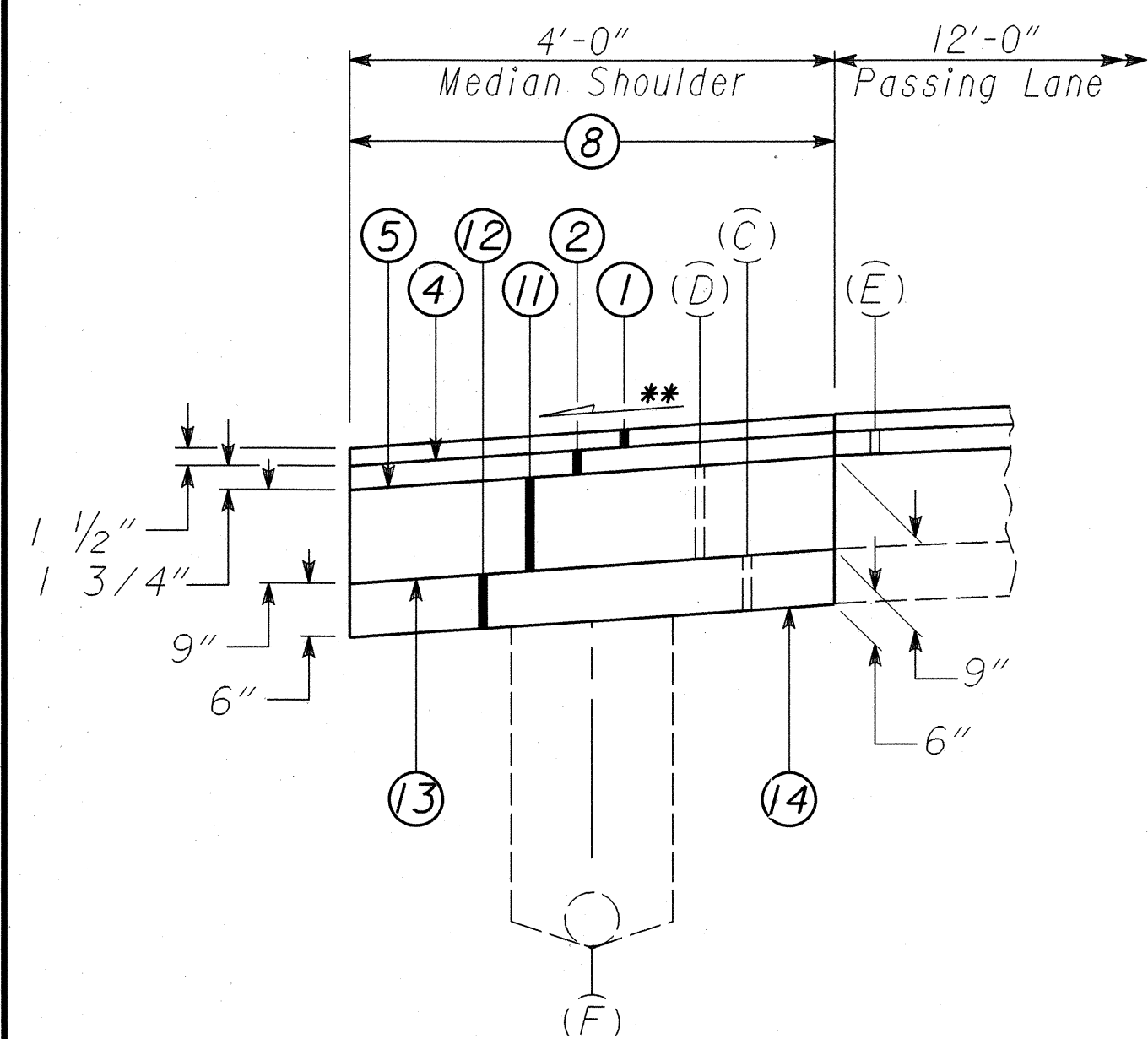
EXISTING LEGEND

- (A) EXISTING 9" REINFORCED CONCRETE PAVEMENT
- (B) EXISTING SUBBASE
- (C) EXISTING AGGREGATE BASE
- (D) EXISTING BITUMINOUS AGGREGATE BASE
- (E) EXISTING ASPHALT CONCRETE
- (F) EXISTING UNDERDRAIN
- (G) EXISTING GUARDRAIL
- (H) EXISTING AGGREGATE DRAIN



**ADJOINING SECTION
STA. 1130+25.00 TO STA. 1135+00.00**

**NORMAL SECTION
STA. 1135+00.00 TO STA. 1150+50.00 (TWO LANE TO FOUR LANE TRANSITION)
STA. 1168+75.64 AH. TO STA. 1262+03.90 (EQUATION: STA. 1168+68.19 BK. = STA. 1168+75.64 AH.)
STA. 1280+75.00 TO STA. 1287+00.00
STA. 1298+75.00 TO STA. 1310+50.00 (EQUATION: STA. 1298+78.92 BK. = STA. 1298+80.75 AH.)
STA. 1330+00.00 TO STA. 1334+03.75**

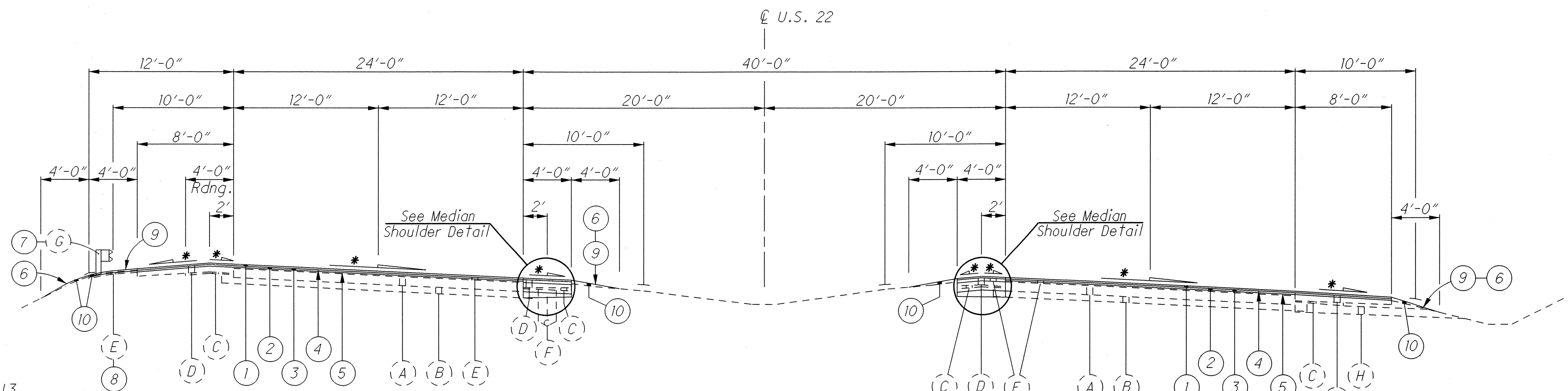


MEDIAN SHOULDER DETAIL

For Limiting Stations, See Sheet No's. 12 & 13.

NOTE: ITEM 302 - ASPHALT CONCRETE BASE SHALL BE APPLIED IN TWO LIFTS.

** 0.04 OR PAVEMENT SLOPE, WHICHEVER IS GREATER



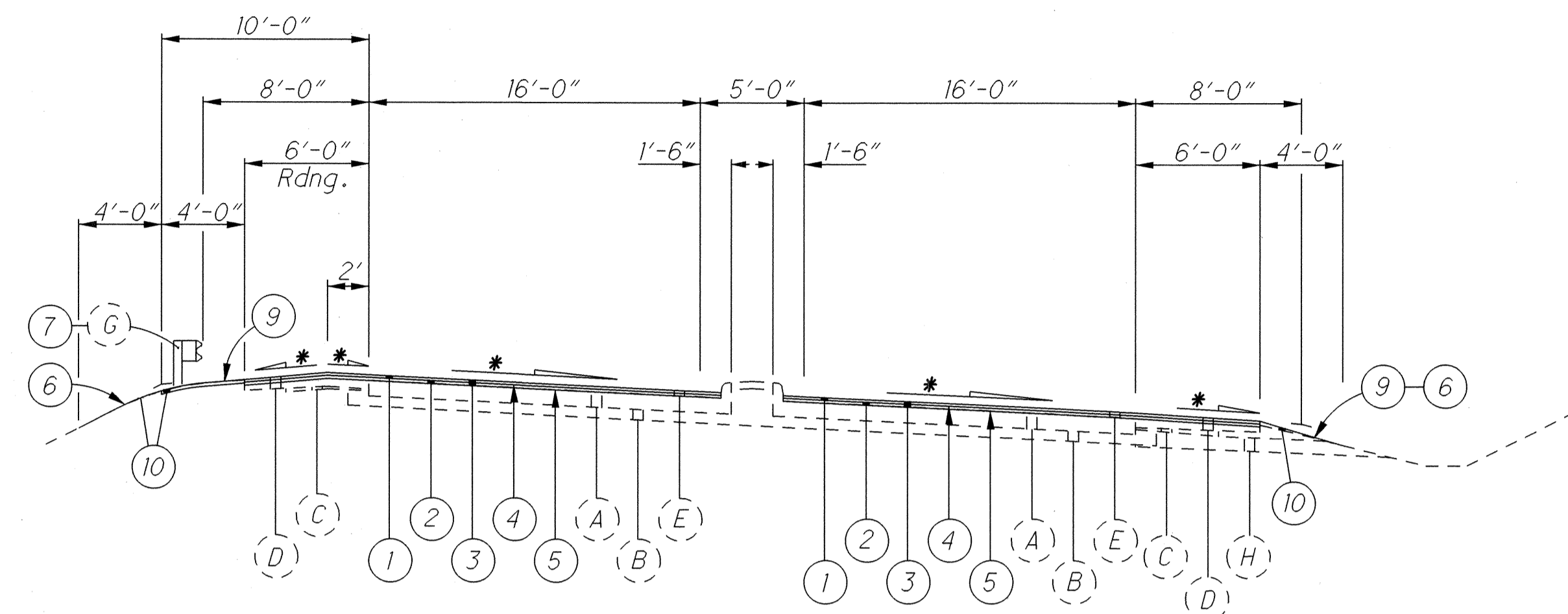
**SUPERELEVATED SECTION
STA. 1150+50.00 TO STA. 1168+68.19 BK. (EQUATION: STA. 1168+68.19 BK. = STA. 1168+75.64 AH.)
STA. 1262+03.90 TO STA. 1280+75.00 (EQUATION: STA. 1280+62.94 BK. = STA. 1280+72.73 AH.)
STA. 1287+00.00 TO STA. 1298+75.00
STA. 1310+50.00 TO STA. 1330+00.00 (EQUATION: STA. 1329+83.81 BK. = STA. 1329+98.24 AH.)**

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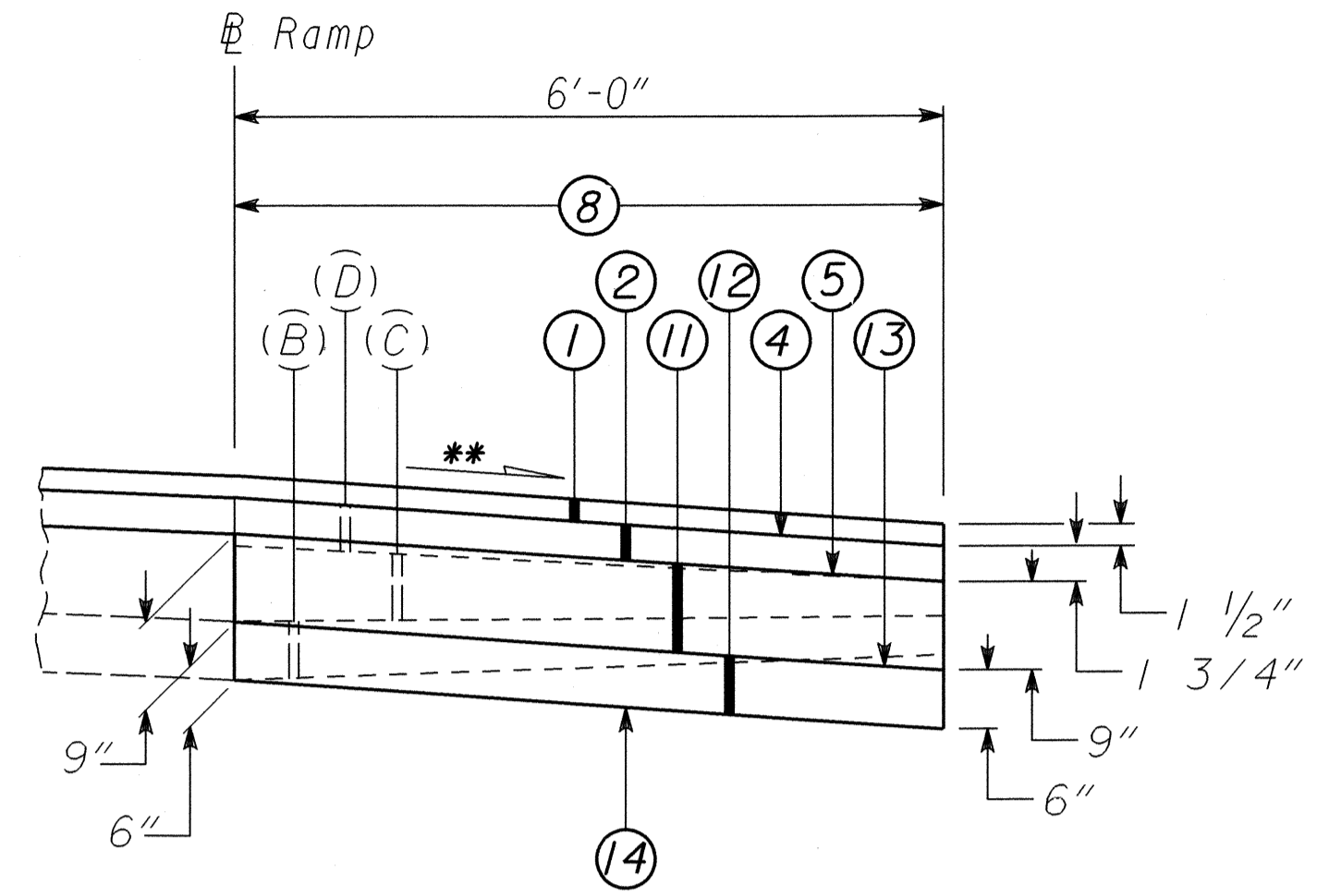
TYPICAL SECTIONS

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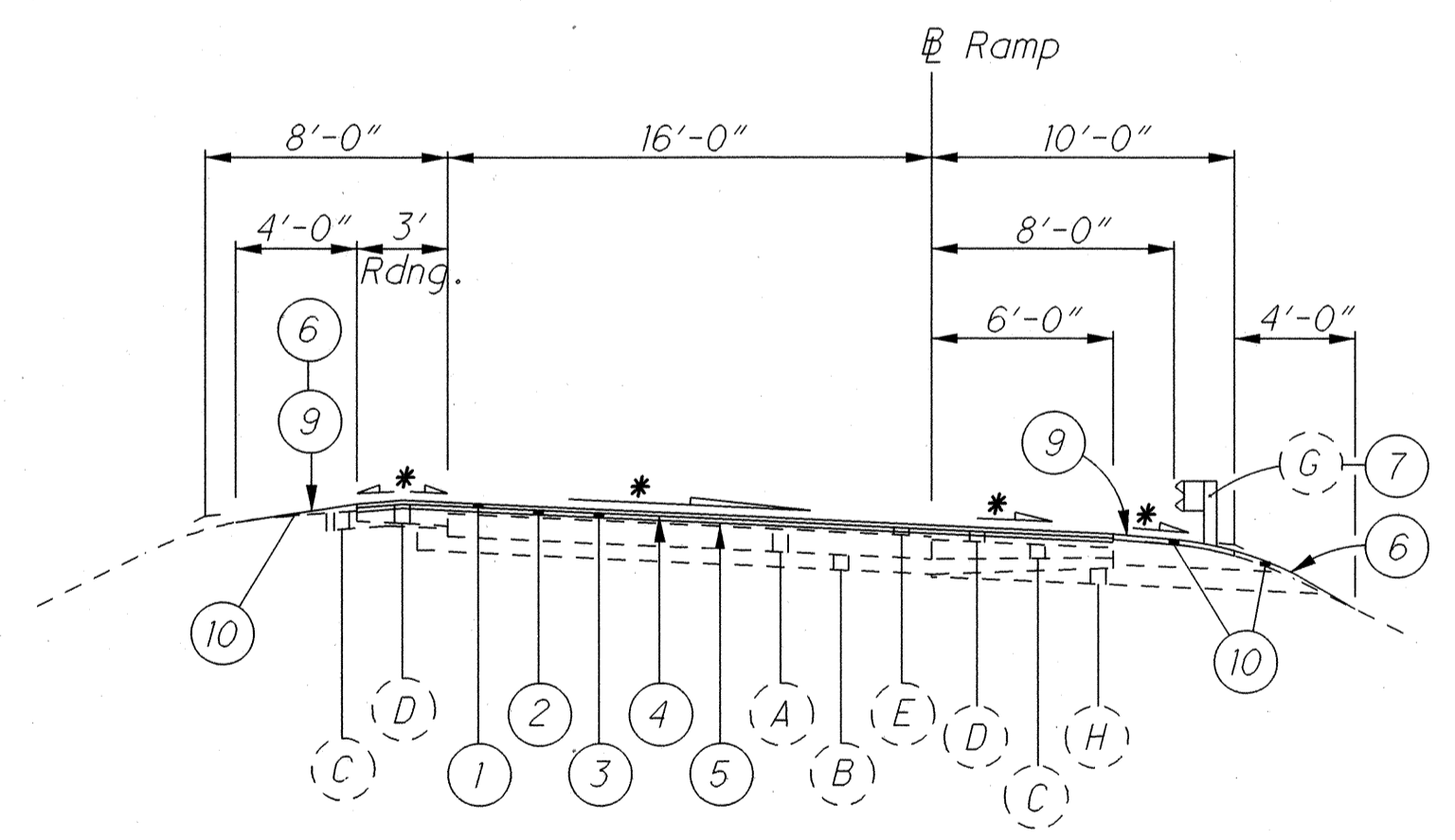
INTERCHANGE RAMPS (TWO WAY)
NOTE: PAVEMENT PLANING (3 1/4" NOMINAL DEPTH)

* SAME SLOPE AS EXISTING

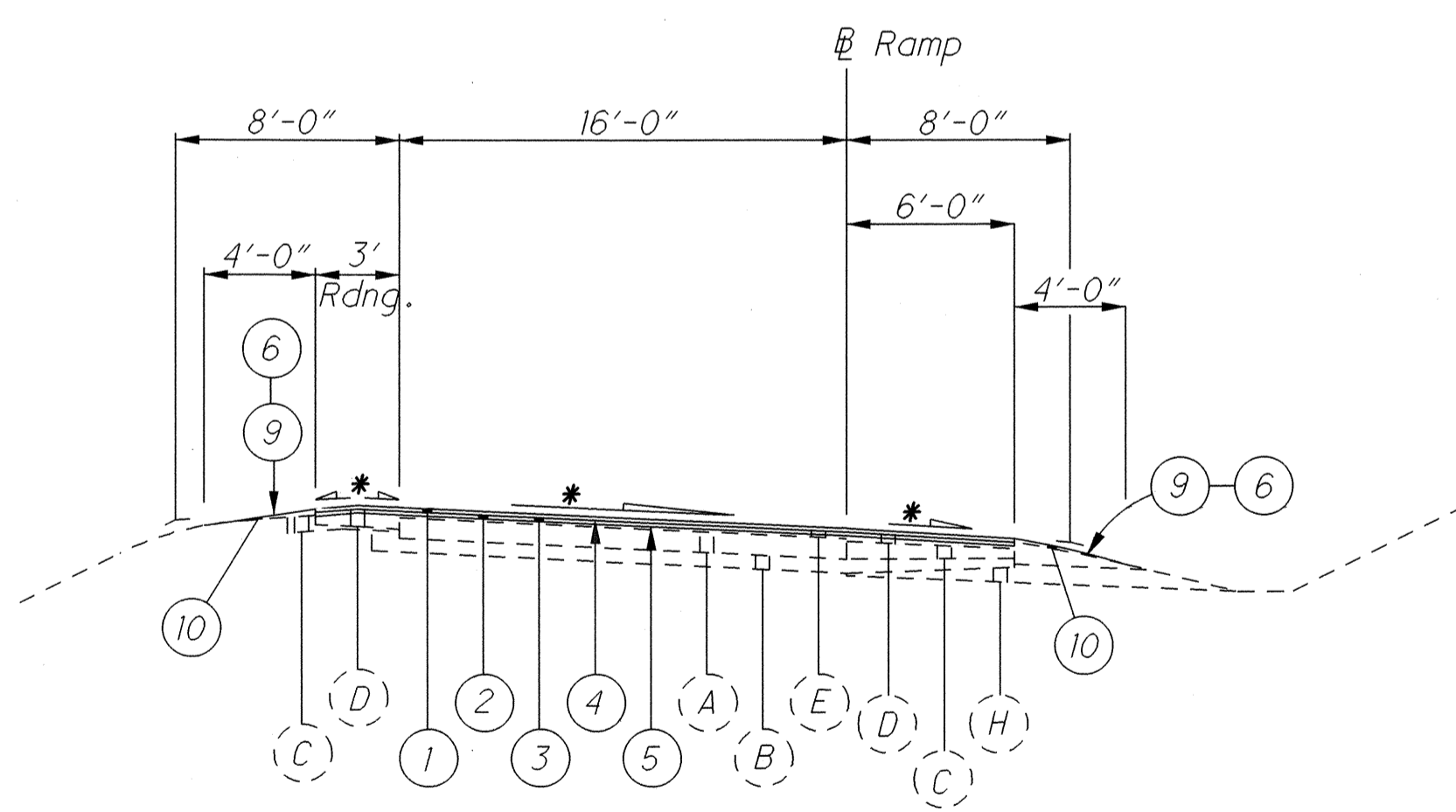


RAMP 'J' & 'T' SHOULDER DETAIL
For Limiting Stations, See Sheet No. 14, 15.

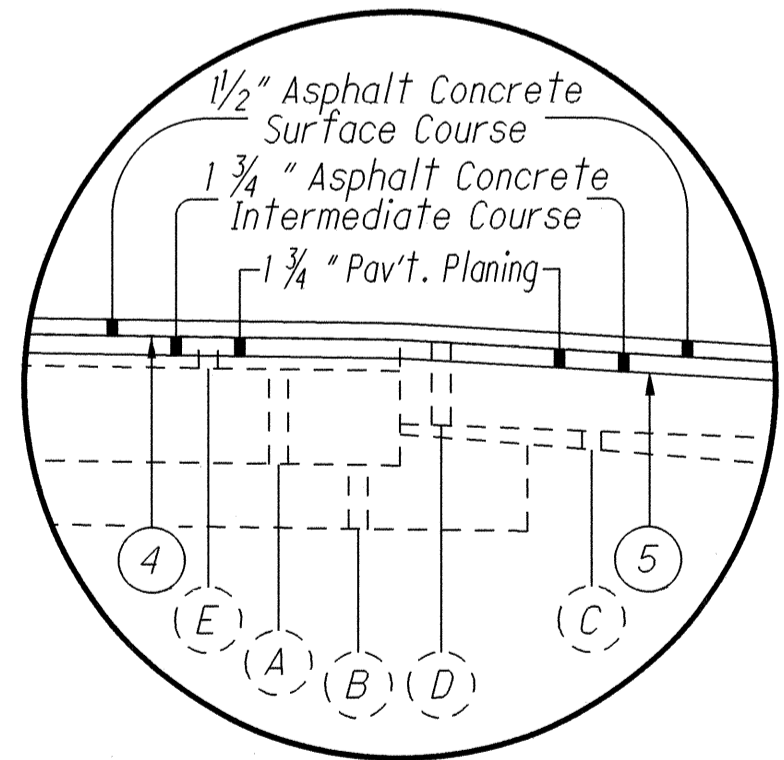
** 0.04 OR PAVEMENT SLOPE, WHICHEVER IS GREATER
NOTE: ITEM 302 - ASPHALT CONCRETE BASE SHALL BE APPLIED IN TWO LIFTS.



INTERCHANGE RAMPS WITH GUARDRAIL



INTERCHANGE RAMPS WITHOUT GUARDRAIL



TYPICAL RESURFACING DETAIL (RAMP & RAMP SHOULDER)

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TYPICAL SECTIONS

HAS-22-21.47

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

This item shall consist of furnishing and installing either of the following guardrail end terminals, or an approved equal as listed on Roadway Engineering's Web Page at WWW.DOT.STATE.OH.US/DRRC/ under roadside safety devices for approved guardrail end treatments:

- The ET-2000 (1997) manufactured by Trinity Industry, 1170 N. State Street, Girard, Ohio 44420 (Telephone: 330-545-4373).

The length of the ET-2000 (1997) system is considered to be 50'-0", inclusive of two 25'-0" long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SS265M	ET-2000 (1997) Plan, Elevation & Sections	6/20/97	3/6/98
SSI42	E2000 PLUS 50'-0" Plan, Elevation & Sections 25'-0" Rail, Sleeve w/PL Posts 1-4	4/12/00	7/31/00
SSI41	ET2000 PLUS Plan, Elevation & Sections 25'-0" Rail, HBA Posts 1-4	2/29/00	7/31/00
SSI58	ET2000 PLUS 50'-0" With 12'-6" Rail, HBA Posts 1-4 Plan, Elevation & Sections	5/22/00	7/31/00

- The SKT-350 manufactured by Road Systems, Inc., 2516 Mallory Lane, Stow, Ohio 44224 (Telephone: 330-346-0721).

The length of the SK-350 system is considered to be 50'-0", inclusive of four 12'-6" long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SKT-4M	Sequential Kinking Terminal (SKT-350) Assembly with 4 foundation tubes	12/11/97	3/6/98

The face of the Type E-98 impact head shall be covered with a sheet of Type G Reflective Sheeting, per CMS 730.19, approximately 18" x 18".

Refer to manufacturer's instruction regarding the installation of, and the grading around, the foundation tubes and ground strut. The top of any foundation tube should be less than 4-inches above the ground. The placement of the foundation tubes should be an appropriate depth below the level line in order to maintain the finished guardrail height of 27 3/4" from the edge of the shoulder.

On-site grading is required if the top of the foundation tubes or top of the ground strut does project more than 4-inches above the ground line.

Payment for the above work shall be made at the unit price bid for Item 606, Anchor Assembly, Type E-98, Each, and shall include all labor, tools, equipment and materials necessary to construct a complete and functional anchor assembly system, including all related transitions, reflective sheeting, hardware, grading, embankment and excavation not separately specified, as required by the manufacturer.

GUARDRAIL PLACEMENT

No hazard shall be left unprotected except for the actual time necessary to remove the existing guardrail, prepare the site, and install new guardrail in a continuous operation. The removal of all guardrail shall at all times be as directed by the Engineer. No guardrail shall be removed until the replacement material is on the site, ready for installation. Failure to comply with this requirement shall be deemed sufficient cause to order work suspended until such time as the Engineer is assured of compliance.

MEDIAN GUARDRAIL GRADING

The Contractor shall install the guardrail as per Standard Drawing GR-6.1. The following estimated quantities have been carried to the General Summary for installation of the median guardrail as directed by the Engineer.

Item 203, Excavation	-----	60 Cu. Yd.
Item 203, Embankment	-----	60 Cu. Yd.
Item 659, Seeding and Mulching	-----	7867 Sq. Yd.
Item 659, Commercial Fertilizer	-----	1.06 Ton
Item 659, Lime	-----	1.63 Acre
Item 659, Water	-----	43 M. Gal.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

This item shall consist of furnishing and installing either of the following guardrail end terminals, or an approved equal as listed on Roadway Engineering's Web Page at WWW.DOT.STATE.OH.US/DRRC/ under roadside safety devices for approved guardrail end treatments:

- The SRT-350, guardrail end terminal as manufactured by Trinity Industry, 1170 N. State Street, Girard, Ohio 44420 (Telephone: 330-545-4373).

The length of the SRT-350 system is considered to be 37'-6", inclusive of three 12'-6" long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SS444	Slotted Rail Terminal Post Layout and Erection Details SRT-350 (12.5, 8 Post)	7/12/99 Rev. 1	8/27/99
SS444M		7/12/99	
SS425M	Slotted Rail Terminal SRT-350 Post Layout and Erection Details (12.5, 9 Post)	6/21/97 Rev. 1	3/6/98

- The FLEAT-350 manufactured by Road Systems, Inc., 2516 Mallory Lane, Stow, Ohio 44224 (Telephone: 330-346-0721).

The length of the FLEAT-350 is considered to be 37'-6", inclusive of three 12'-6" long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
FLT-M	Flared Energy Absorbing Terminal (FLEAT-350) Assembly	4/16/98	7/31/98

Refer to manufacturer's instruction regarding the installation of, and the grading around, the foundation tubes and ground strut. The top of any foundation tube should be less than 4-inches above the ground. The placement of the foundation tubes should be an appropriate depth below the level line in order to maintain the finished guardrail height of 27 3/4" from the edge of the shoulder.

On-site grading is required if the top of the foundation tubes or top of the ground strut does project more than 4-inches above the ground line.

The face of the Type B-98 impact head shall be covered with Type G reflective sheeting, per CMS 730.19: Approximately 36" w x 12" h for the SRT-350 and 14" w x 20" h for the FLEAT.

Payment for the above work shall be made at the unit price bid for Item 606, Anchor Assembly, Type B-98, Each, and shall include all labor, tools, equipment and materials necessary to construct a complete and functional anchor assembly system, including reflective sheeting and all related hardware, grading, embankment and excavation not separately specified, as required by the manufacturer.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

The Contractor shall apply the epoxy-urethane concrete sealer to all exposed surfaces of the concrete pier protection barrier at Bridge No. HAS-22-2190. The epoxy sealer shall be tinted Federal Color Standard No. 1778 (Light Neutral).

GUARDRAIL REMOVED, AS PER PLAN

The following quantity of existing rail panels shall become the property of the Ohio Department of Transportation and are to be delivered by the Contractor at his expense to the following location:

5000 Ft. delivered to:

Harrison County Garage
43041 South Industrial Park Rd.
Cadiz, Ohio 43907

The Contractor will supply all labor and equipment to stockpile the material in a manner acceptable to the Engineer. For additional information contact the Harrison County Manager at 740-942-3274.

ITEM 606 - IMPACT ATTENUATOR, TYPE I-98 (BIDIRECTIONAL)

This item shall consist of furnishing and installing either of the following impact attenuators, or an approved equal as listed on Roadway Engineering's Web Page at WWW.DOT.STATE.OH.US/DRRC/ under roadside safety devices for approved impact attenuators:

- The C-A-T manufactured by Trinity Industry, 1170 N. State Street, Girard Ohio 44420 (Telephone: 330-545-4373).

The length of the C-A-T system is considered to be 31'-3" long. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SS245M	Crash-Cushion Attenuating Terminal Plan, Elevation & Sections for use as a Longitudinal Median Barrier Terminal or Crash Cushion Attenuator	4/10/97 Rev. 4	3/6/98
SS224M	C-A-T Transition to Median Barrier Guardrail Plan, Elevation & Sections	4/26/96	3/6/98
SS226M	C-A-T Transition to Vertical Wall or Pier Plan, Elevation & Sections	4/26/96	3/6/98

- The Breakmaster manufactured by Energy Absorption Systems, Inc., One East Wacker Drive, Chicago, IL 60601 (Telephone: 312-467-6750).

The length of the Breakmaster System is considered to be 32'-8" long. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
92-00-02	Brakemaster General Assembly (Bidirectional System)	3/10/97 Rev. K	3/6/98
92-00-82	Brakemaster (Bidirectional) with Foundation Tubes	2/9/98	3/6/98
9202024	Anchor Assembly, Foundation Tube, 6 1/2 Ft., BRS	6/12/97 Rev. D	3/6/98

- The FLEAT-MT manufactured by Road Systems, Inc. (RSI), 3616 Old Howard County Airport Road, Big Springs, TX, 79720 (Telephone: 915-263-2435) and available from RSI's list of approved distributors.

The length of the FLEAT-MT System is considered to be 37'-6" long. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings and the manufacturer's installation manual:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
MEDFLT-W-US	Flared Energy Absorbing Terminal - FLEAT-MT Assembly for Wood Breakaway Post System	4/10/02 Rev. 5	1/6/03
MEDFLT-S-US	Flared Energy Absorbing Terminal - FLEAT-MT Assembly for Steel Breakaway Post System	4/10/02 Rev. 6	1/6/03

The face of the Type I-98 impact head shall be covered with a sheet of Type G reflective sheeting, per CMS 730.19, approximately 36" x 12" (one 9" x 18" for each FLEAT-MT impact head). Payment for the above work shall be made at the unit price bid for Item 606, Impact Attenuator, Type I-98 (bidirectional), each, and shall include all labor, tools, equipment and materials necessary to construct a complete and functional impact attenuator system, including all related transitions, hardware, reflective sheeting and grading, not separately specified, as required by the manufacturer.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

When it is necessary to splice proposed guardrail to existing guardrail, only the existing guardrail shall be cut, drilled, or punched. The connection shall be made using a "W-Beam Rail Splice" as shown in AASHTO M 180. Payment shall be included in the contract price for the respective guardrail items.

MAINTAINING TRAFFIC, AS PER PLAN

The Contractor shall maintain traffic at all times in accordance with the requirements of CMS Item 614, these maintenance of traffic notes and details, the Standard Construction Drawings, and the traffic control details described in these plans.

The minimum lane width for traffic control shall be 11 feet at all times. It is the responsibility of the Contractor to organize his work in such a manner to provide the most safety with the least inconvenience to the traveling public.

The Contractor is responsible for designing the maintenance of traffic scheme. The Contractor shall submit, in writing, this maintenance of traffic scheme and a schedule of operations to the Engineer and receive approval before work is started on the project.

The proposed median shoulder work shall be completed before traffic is permitted to be maintained on it.

Any open pavement trench or dropoff shall be adequately maintained and protected. The protection used shall meet the requirements of the dropoffs in work zones sheet included in this plan.

Under no circumstances shall the Contractor be permitted to have work zones which alternately close both the passing and travel lane unless the distance between the lane restrictions exceeds 2 miles.

The Contractor shall be responsible for smooth and orderly flow of traffic through the project area 24 hours per day for the duration of the project. This consists of notifying the Ohio State Patrol after encountering any accidents or disabled vehicles or objects hindering the flow of traffic.

The Contractor shall designate to the Engineer a person responsible for maintenance of traffic control during non-work hours who shall be available within (30) minutes after notification.

Payment for providing watchmen, furnishing, erecting, maintaining and removing signs, cones, markers, special lighting, floodlighting, work zone pavement markings, work zone raised pavement markers, etc., shall be included in the lump sum price bid for Item 614 Maintaining Traffic, As Per Plan.

The Contractor shall furnish, install and maintain all additional signs or other traffic control devices as required above. All costs involved in furnishing, installing and maintaining these devices shall be included in the lump sum price bid for Item 614, Maintaining Traffic, As Per Plan.

Unless the Engineer deems it physically impossible, all construction equipment shall exit all work zones from the downstream end of the work zone or by interchange ramps. Under no circumstances shall the Contractor be permitted to directly transport or operate any equipment across the open lanes of the roadway.

Length and duration of lane closures and restrictions shall be at the approval of the Engineer. It is the intent to minimize the impact to the traveling public. Lane closures or restrictions over segments of the project in which no work is anticipated within a reasonable time frame, as determined by the Engineer, shall not be permitted. The level of utilization of maintenance of traffic devices shall be commensurate with the work in progress.

The planing and resurfacing will proceed continuously a minimum of five (5) days per week, weather permitting, excepting holidays and events listed below:

No work shall be performed and all existing lanes shall be open to traffic during the following designated holidays and events:

Memorial Day Fourth of July
Labor Day Thanksgiving

The period of time that the lanes are to be opened depends on the day of the week on which the holiday or event falls. The following schedule shall be used to determine this period:

Table with 2 columns: Day of the week, Time all lanes must be opened to traffic. Rows include Sunday through Saturday with corresponding time ranges.

No extensions of time shall be granted for delays in material deliveries, unless such delays are industry-wide, or for labor strikes, unless such strikes are area-wide.

All work and traffic control devices shall be in accordance with 614 and other applicable portions of the specifications, as well as the Ohio Manual of Uniform Traffic Control Devices. Payment for all labor, equipment and materials shall be included in the lump sum contract price for Item 614, Maintaining Traffic, As Per Plan, unless separately itemized in the plan.

NOTIFICATION OF WORK ZONE LANE RESTRICTIONS

The Contractor shall notify the Engineer at least eighteen (18) days prior to implementing any work zone restriction that will reduce the width or vertical clearance of any lane on which traffic will be maintained during construction. The Engineer shall immediately notify the District Roadway Services Manager to advise the Office of Highway Management of the restrictions.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

In addition to the requirements of section 614.03 of the Construction and Material Specifications the following shall apply. The Contractor's equipment shall be operated in the direction of traffic where practical. A flagger shall be used where the Contractor's equipment must merge with the traffic stream. The Contractor's vehicles and equipment shall be equipped with at least one amber flashing light.

Equipment may be parked in areas along the highway, thirty feet (30') from the edge of traveled highway unless behind guardrail, when various operations are scheduled to continue the next workday. On weekends or at other times of suspension of work, the equipment shall be stored at a storage area removed from the interstate route right of way. No equipment shall be parked in the median of the highway. Adequate barricades and light shall be placed on the pavement side of the equipment to identify the limits of the equipment. All other equipment, including private vehicles, shall be stored at the approved Contractor's storage area.

MOVEMENT OF DRUMS

The row of drums along a closed lane shall be moved out of the open lane onto the new pavement as soon as paving operations permit.

ITEM 614 - WORK ZONE INCREASED PENALTIES SIGN (R11-H5a)

R11-H5a-48 signs shall be furnished, erected, and maintained in good condition and/or replaced as necessary and subsequently removed by the Contractor. Signs shall be mounted at the appropriate offsets and elevations as prescribed by the Ohio Manual of Uniform Traffic Control Devices. They shall be maintained on supports meeting current safety criteria.

The signs may be erected or uncovered no more than four hours before the actual start of work. The signs shall be removed or covered no later than four hours following restoration of all lanes to traffic with no restrictions, or sooner as directed by the Engineer. Temporary sign covering and uncovering due to temporary lane restorations shall be guided by the four-hour limitations stated above. Such lane restorations should be expected to remain in effect for 30 or more consecutive calendar days, such as during winter shut-downs.

The signs shall be dual mounted. The first sign shall be placed between the "ROAD WORK AHEAD" (W20-1) sign and the next sign in the sequence. Signs shall be erected on each entrance ramp and every 2 miles through the construction work limits.

The Contractor may use signs and supports in used, but good, condition provided the signs meet current ODOT specifications. Sign faces shall be reflectorized with Type G sheeting complying with the requirements of CMS 730.19.

Work zone increased penalties signs and supports will be measured as the number of sign installations, including the sign and necessary supports. If a sign and support combination is removed and re-erected at another location as directed by the Engineer, it shall be considered as another unit.

Payment for accepted quantities, complete in place, will be made at the contract unit price. Payment shall be full compensation for all materials, labor, incidentals and equipment for furnishing, erecting, maintaining, covering during suspension of work, and removal of the sign and support.

Item 614, Work Zone Increased Penalties Sign - - - - - 12 Each

DROPOFFS IN WORK ZONES

The wedge treatment as detailed in the "dropoffs in work zones" sheet will be required and shall be included in the lump sum bid for Item 614 - Maintaining Traffic, As Per Plan.

WORK ZONE PAVEMENT MARKINGS

The Contractor shall be required to install work zone markings. Work zone pavement markings shall be 642 paint.

Prior to placement of any work zone pavement markings, the Contractor shall completely obliterate, as per 641.10, all existing pavement markings that would create confusion or conflict with the work zone pavement markings.

The following estimated quantity has been carried to the General Summary:

Item 614, Work Zone Lane Line, Class 1, 642 Paint - - - - 22.92 Mile
Item 614, Work Zone Edge Line, Class 1, 642 Paint - - - - 52.98 Mile

Work zone raised pavement markers cannot be used to simulate (replace) any type of work zone pavement marking.

FLOODLIGHTING

Floodlighting of the work site for operations conducted during night time periods shall be accomplished so that the lights do not cause glare to the drivers on the roadway. To ensure the adequacy of the floodlight placement, the Contractor and the Engineer shall drive throughout the worksite each night when the lighting is in place and operative prior to commencing any work. If glare is detected, the light placement and shielding shall be adjusted to the satisfaction of the Engineer before work proceeds. Payment for all labor, equipment and materials shall be included in the lump sum contract price for Item 614, Maintaining Traffic, As Per Plan.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

The following estimated quantity has been carried to the General Summary for use as directed by the Engineer:

Item 614, Asphalt Concrete for Maintaining Traffic - - - 50 Cu. Yd.

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MAINTENANCE OF TRAFFIC

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ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

Use of Law Enforcement Officers (LEOS) by Contractors other than the uses specified in this note will not generally be permitted at project cost unless prior approval has been obtained from the Engineer. LEOS should not be used where The Ohio Manual of Uniform Traffic Control Devices (OMUTCD) intends that flaggers be used.

In addition to the requirements of CMS 614 and the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) should be provided for controlling traffic for the following tasks:

For lane closures:

During initial set-up periods, tear down periods, substantial shifts of a closure point or when new lane closure arrangements are initiated. In general, LEOS should be positioned at the point of lane restriction or road closure and to manually control traffic movements through intersections in work zones.

During the entire advance preparation and closure sequence where complete blockage of traffic is required.

Routine patrolling through the work zone (with flashing lights off) as specified in the plans.

LEOS should not forgo their traffic control responsibilities to apprehend motorists for routine traffic violations. However, if a motorist's actions are considered to be reckless, then pursuit of the motorist is appropriate.

The LEOS work at the direction of the Contractor. The Contractor is responsible for securing the services of the LEOS and communicating the intentions of the plans with respect to duties of the LEOS. The Engineer shall have final control over the LEO'S duties and placement, and will resolve any issues that may arise between the two parties. The Contractor shall provide the Engineer with a list of the appropriate law enforcement agency(s), including address and telephone number.

The LEO should report in to the Contractor prior to the start of the shift to receive instructions regarding specific work assignments during the shift. The LEO is expected to stay at the project site for the entire duration of the shift. Should it be necessary to leave the project site, the LEO should notify the Engineer. The Contractor shall provide the LEO with a two-way communication device which shall be returned to the Contractor at the end of the shift.

Law enforcement officers (with patrol car) required by the traffic maintenance tasks above shall be paid for on a unit price (hourly) basis under Item 614, Law Enforcement Officer (with patrol car). The following estimated quantity has been carried to the General Summary.

Item 614, Law Enforcement Officer with Patrol Car - - - 200 Hours

The hours paid shall include minimum show-up time required by the law enforcement agency involved.

Any additional costs (administrative or otherwise) incurred by the Contractor to obtain the services of an LEO are included with the bid unit price for Item 614, Law Enforcement Officer with Patrol Car.

ITEM 614 - WORK ZONE SPEED LIMIT SIGN

The Contractor shall furnish, install, maintain, cover during suspension of work, and subsequently remove Work Zone Speed Limit (R2-1-48) (55 MPH Speed Limit) signs and supports within the work limits in accordance with the following requirements:

The Contractor shall cover or remove any existing Speed Limit signs within the reduced Speed Zone. These signs shall be restored during suspension or termination of the reduced speed limit. The expense of covering or removal and restoration of existing Speed Limit or Minimum Speed Limit signs shall be included in the pay item for the Work Zone Speed Limit signs.

The Work Zone Speed Limit signs may be erected or uncovered no more than 4 hours before the actual start of work. The signs shall be removed or covered no later than 4 hours following restoration of all lanes to traffic with no restrictions, or sooner as directed by the Engineer. Temporary sign covering and uncovering due to temporary lane restorations shall be guided by the four-hour limitations stated above. Such lane restorations should be expected to remain in effect for 30 or more days, such as during winter shut-downs.

Construction and Material Specifications, Item 614, Paragraph 614.02(B) indicates that the two directions of a divided highway are considered separate highway sections. Therefore, if the work on a multi-lane divided highway is limited to only one direction, speed reduction in the direction of the work does not automatically constitute speed reduction in the opposite direction. Speed limit reduction in the opposite direction, in such case, is appropriate only if conditions are expected to have an impact on the directional traffic flow, as directed by the Engineer.

The Contractor shall erect a Work Zone Speed Limit sign in advance of any lane restriction expected to last at least 30 consecutive calendar days, or as directed by the Engineer. The sign shall be mounted on both sides of a directional roadway of divided highways. The first Work Zone Speed Limit sign shall be placed 500 feet in advance of the lane reduction or shift taper or at a point wherever construction begins, whichever comes first. On undivided highways the sign shall be mounted on the right side, 250 feet in advance of the taper. The sign shall be repeated, on the side nearest traffic, every 1 mile for 55 mph zones and every one-half mile for 50 mph and 45 mph zones. These signs shall also be erected immediately after each open entrance ramp within the zone.

Reduce Speed Ahead signs shall be erected in advance of the speed reduction, approximately 1300 feet on multi-lane highways and 500 feet on 2-lane highways.

A sign(s) to indicate the resumption of the statutory speed limit shall be erected at the end of any reduced Speed Zone. R2-1 (Speed Limit) signs shall be used on undivided roadways. R2-1 (Speed Limit) and R2-H2a signs shall be used on divided roadways. When used the R2-1 and R2-H2a signs shall be mounted side-by-side on separate supports. The Contractor may use signs and supports in used, but good, condition provided the signs meet current ODOT specifications. Sign faces shall be reflectorized with Type G sheeting complying with the requirements of CMS 730.19.

Work Zone Speed Limit signs shall be mounted on two Item 630, Ground Mounted Supports, No. 3 Posts.

Work Zone Speed Limit signs and supports will be measured as the number of sign installations, including the signs and necessary supports. If a sign and support combination is removed and reerected at another location within the project due to changes in the Speed Zone directed by the Engineer, it shall be considered another unit.

Payment for accepted quantities, complete in place, will be made at the contract unit price. Payment shall be full compensation for all materials, labor, incidentals, and equipment for furnishing, erecting, maintaining, covering during suspension of work, and removing the signs and supports. The following estimated quantity has been carried to the General Summary.

Item 614, Work Zone Speed Limit Sign - - - - - 8 Each

SPECIAL-AIR SPEED ZONE MARKING

The Contractor shall contact the District II Survey Operations Manager at 330-308-7866 when the paving and linear grading is complete for the restoration of the Air Speed Zone Markings. The Air Speed Zone Markings will be applied by District personnel.

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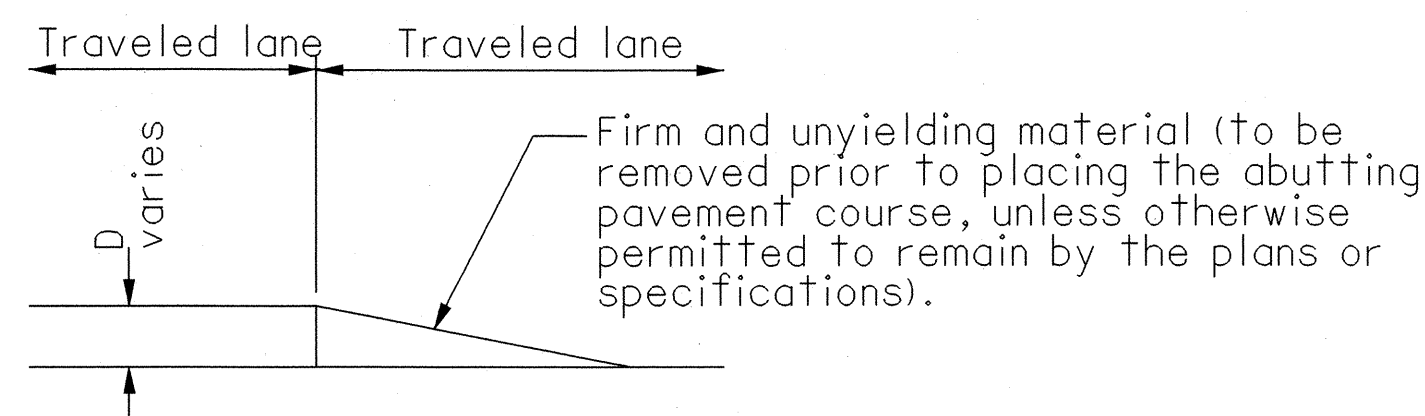
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GENERAL NOTES

- It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. The suggested treatments are intended for high volume projects that will last at least seven days and have an active work zone 1 mile [1.6 km] or less in length. For guidance on the use of this sheet, see L&D Manual Volume One, Section 500. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
- While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
- In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
- The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
- Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing RM-4.2 and Item 622.
- When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
- When W8-9 (Low Shoulder) signs or W8-9a (Shoulder Drop-Off) signs or W8-11 (Uneven Lanes) signs are required, they shall be placed 750 feet [230 m] in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the drop-off condition extends more than 0.5 mile [800 m], additional signs should be erected at intervals of 1.0 mile [1600 m] or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate a difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
- Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10 feet [3.0 m], drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5 inches [125] and approval is granted by the Project Engineer.
- Pavement Repairs (or similar work):
 - Lengths greater than 60 feet [18 m] - utilize appropriate Treatment from Condition I.
 - Lengths of 60 feet [18 m] or less - repairs shall be effected in accordance with CMS 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT (MILLING OR RESURFACING)

- This treatment may be used when permitted for Condition I only.
- W8-11 sign required.



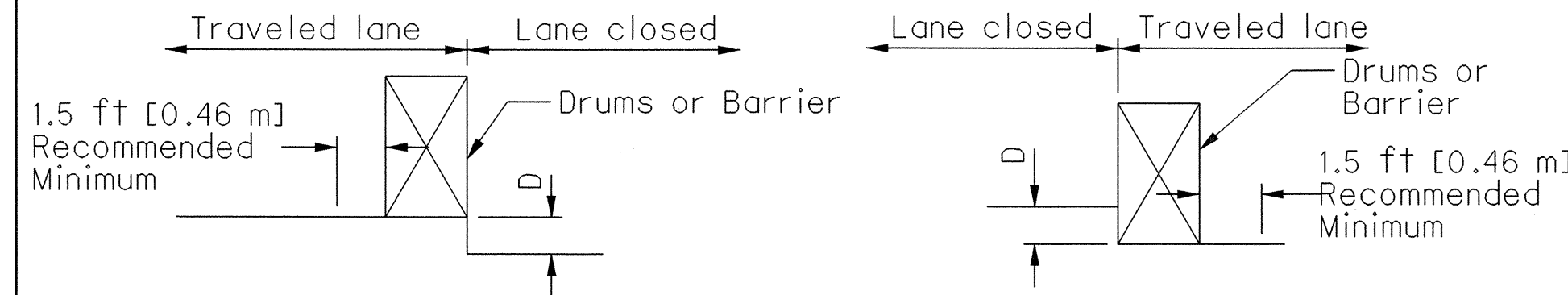
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

- These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D - inches (mm)	Treatment
< 1-1/2 [< 40]	Erect W8-11 sign.
1-1/2 - 3 [$40-75$]	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3 - 5 [$> 75-125$]	Lane closure utilizing drums as shown below.
> 5 [> 125]	Lane closure utilizing portable concrete barrier as shown below.

* Cones may be used for daytime only conditions.



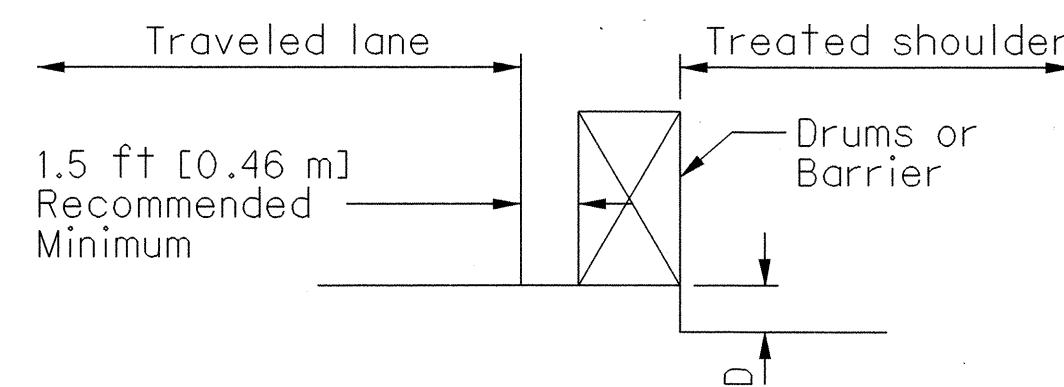
CONDITION II

DROP-OFFS WITHIN GRADED SHOULDER AREA

- The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
- The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials or concrete). For the purpose herein, its maximum width shall be considered to be 12 feet [3.6 m].

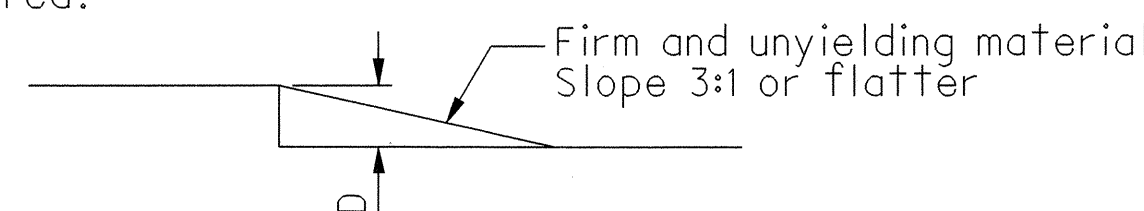
D - inches (mm)	Treatment
< 1-1/2 [< 40]	1) Erect W8-9a signs.
> 1-1/2 - 5 [$> 40-125$]	1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5 - 12 [$125-305$] Daylight only	If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below.
> 5 - 24 [$> 125-610$]	1) If minimum lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums.
> 24 [> 610]	Lane closure utilizing portable concrete barrier as shown below.

* Minimum lane widths shall be 10 ft [3.0 m] unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

- This treatment may not be used within a bituminous shoulder where a hot longitudinal joint per CMS 401.15 is required.
- W8-9 signs required.



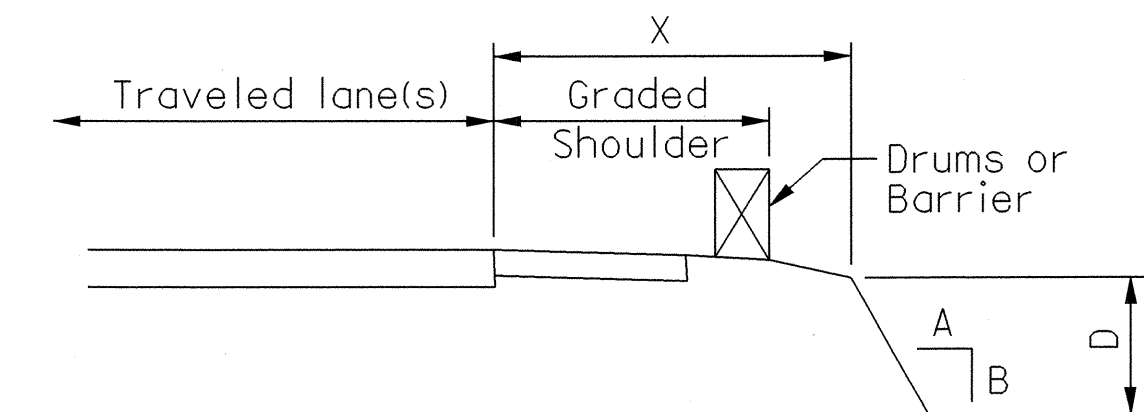
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

- See Note 2 under Condition II.
- Use Chart A or B below, as applicable.

CHART A

- USE FOR:
- Uncurbed Facilities
 - Curbed Facilities, where:
 - Curbs are less than 6 inch [150] in height
 - Curbs are 6 inch [150] or greater in height and the legal speed is greater than 40 mph [70 km/hr].

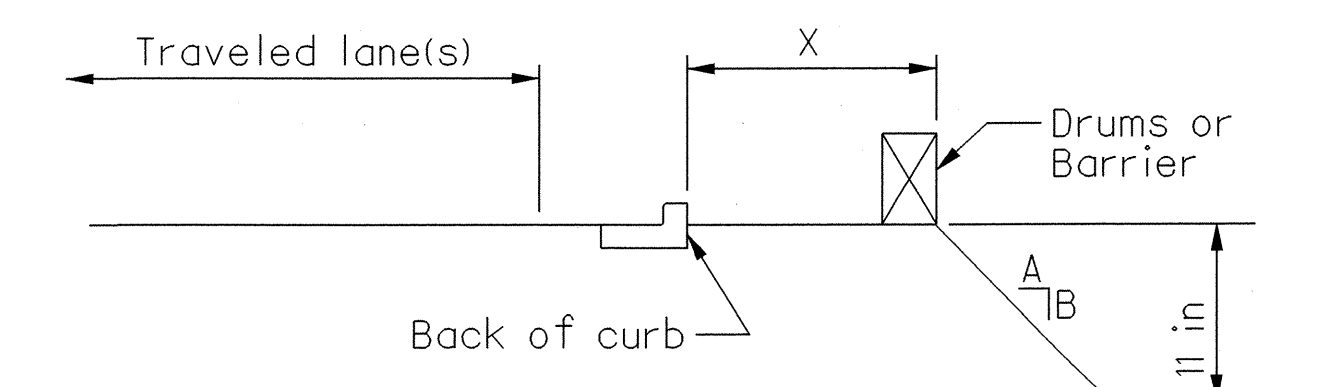


X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 - 4 [0 - 1.2]	Any	Any	(a)	(a)
4 - 30 [1.2 - 9.1]	Any	3:1 or Flatter	None	None
4 - 12 [1.2 - 3.6]	< 3 [< 75]	Steeper than 3:1	None	None
4 - 12 [1.2 - 3.6]	> 3 - < 12 [$> 75 - < 305$]	Steeper than 3:1	Drums	Drums
4 - 12 [1.2 - 3.6]	> 12 [> 305]	Steeper than 3:1	Drums	Barrier
> 12 - 20 [$> 3.6 - 6.1$]	< 12 [< 305]	Steeper than 3:1	None	None
> 12 - 20 [$> 3.6 - 6.1$]	> 12 - 24 [$> 305 - < 610$]	Steeper than 3:1	Drums	Drums
> 12 - 20 [$> 3.6 - 6.1$]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 20 - 30 [$> 6.1 - 9.1$]	< 24 [< 610]	Steeper than 3:1	None	None
> 20 - 30 [$> 6.1 - 9.1$]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 30 [> 9.1 m]	Any	Any	None	None

(a) Use treatment specified under Condition II.

CHART B

- USE FOR: Curbed facilities, where the curb is 6 inches [150 mm] or greater in height and the legal speed is 40 mph [70 km/h] or less.



X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 - 10 [0 - 3.0 m]	< 12 [< 305]	Any	None	Drums
0 - 10 [0 - 3.0 m]	> 12 [> 305]	Any	Drums	Drums
> 10 [> 3.0 m]	Any	Any	None	None

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LOCATION	STATION		LENGTH * CADD Generated	WIDTH FT.	AREA * CADD Generated	ITEM 202	ITEM 204	ITEM 254	ITEM 302		ITEM 304	ITEM 407	ITEM 407	ITEM 408	ITEM 442		ITEM 442		
	FROM	TO				PAVEMENT REMOVED	SUBGRADE COMPACTION	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	THICKNESS	ASPHALT CONCRETE BASE, PG64-22	THICKNESS	AGGREGATE BASE	TACK COAT (AT 0.075 GAL./S.Y.)	TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.)	PRIME COAT, AS PER PLAN (AT 0.4 GAL./S.Y.)	THICKNESS	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) AS PER PLAN
			FT.	FT.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	INCH	CU.YD.	INCH	CU.YD.	GALLON	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.
S.R. 151 INTERCHANGE																			
RAMP 'J'																			
	13+10.71 'K'	12+70.70 'K'	40.01	Varies	118.85 *			118.85					8.91	4.75		1.75	5.78	1.5	4.95
	12+70.70 'K'	6+82.18 'K'	588.52	17	1111.65			1111.65					83.37	44.47		1.75	54.04	1.5	46.32
	0+00	0+62	62	17	117.11			117.11					8.78	4.68		1.75	5.69	1.5	4.88
	0+62	6+61.03	599.03	16	1064.94			1064.94					79.87	42.6		1.75	51.77	1.5	44.37
Right Shoulder	13+10.71 'K'	12+70.70 'K'	58.1 *	6	38.73	38.73	38.73		9	9.68	6	6.46	2.91	1.55	15.49	1.75	1.88	1.5	1.61
Right Shoulder	12+70.70 'K'	6+82.18 'K'	588.52	6	392.35	392.35	392.35		9	98.09	6	65.39	29.43	15.69	156.94	1.75	19.07	1.5	16.35
Right Shoulder	0+00	5+46.81	546.81	6	364.54	364.54	364.54		9	91.14	6	60.76	27.34	14.58	145.82	1.75	17.72	1.5	15.19
Right Shoulder	5+46.81	6+46.81	100	7 avg.	77.78	77.78	77.78		9	19.44	6	12.96	5.83	3.11	31.11	1.75	3.78	1.5	3.24
Right Shoulder	6+46.81	10+68.36	421.55	8	374.71	374.71	374.71		9	93.68	6	62.45	28.1	14.99	149.88	1.75	18.22	1.5	15.61
Left Shoulder	0+62	6+61.03	599.03	3	199.68		199.68						14.98	7.99		1.75	9.71	1.5	8.32
RAMP 'K'																			
	2+43.77	6+23.60	379.9	16	675.38		675.38						50.65	27.02		1.75	32.83	1.5	28.14
	6+23.60	12+60.71	637.11	17	1203.43		1203.43						90.26	48.14		1.75	58.5	1.5	50.14
	12+60.71	13+10.71	50	Varies	158.98 *		158.98						11.92	6.36		1.75	7.73	1.5	6.62
Right Shoulder	0+00	1+75	175	8	155.56		155.56						11.67	6.22		1.75	7.56	1.5	6.48
Right Shoulder	1+75	2+15	40	7 avg.	31.11		31.11						2.33	1.24		1.75	1.51	1.5	1.3
Right Shoulder	2+15	12+60.71	1045.71	6	697.14		697.14						52.29	27.89		1.75	33.89	1.5	29.05
Right Shoulder	12+60.71	13+10.71	73.8 *	6	49.2		49.2						3.69	1.97		1.75	2.39	1.5	2.05
Left Shoulder	2+43.77	6+23.60	379.9	3	126.63		126.63						9.5	5.07		1.75	6.16	1.5	5.28
RAMP 'L'																			
	3+33.08	6+65.56	332.48	16	591.08		591.08						44.33	23.64		1.75	28.73	1.5	24.63
	6+65.56	7+56.66	91.1	Varies	241.89 *		241.89						18.14	9.68		1.75	11.76	1.5	10.08
Right Shoulder	0+00	3+17.35	317.35	8	282.09		282.09						21.16	11.28		1.75	13.71	1.5	11.75
Right Shoulder	3+17.35	4+17.35	100	7 avg.	77.78		77.78						5.83	3.11		1.75	3.78	1.5	3.24
Right Shoulder	4+17.35	6+65.56	248.21	6	165.47		165.47						12.41	6.62		1.75	8.04	1.5	6.90
Right Shoulder	6+65.56	7+56.66	106.8 *	6	71.2		71.2						5.34	2.85		1.75	3.46	1.5	2.97
Left Shoulder	3+33.08	7+08	374.92	3	124.97		124.97						9.37	5		1.75	6.08	1.5	5.21
RAMP 'M'																			
	0+11.67	0+92.05	80.38	Varies	310.36 *		310.36						23.28	12.41		1.75	15.09	1.5	12.93
	0+92.05	5+66.07	474.02	16	842.7		842.7						63.2	33.71		1.75	40.97	1.5	35.11
Right Shoulder	0+11.67	0+92.05	100.3 *	6	66.87		66.87						5.02	2.68		1.75	3.25	1.5	2.79
Right Shoulder	0+92.05	5+75.02	482.97	6	321.98		321.98						24.15	12.88		1.75	15.65	1.5	13.42
Right Shoulder	5+75.02	6+15.02	40	7 avg.	31.11		31.11						2.33	1.24		1.75	1.51	1.5	1.3
Right Shoulder	6+15.02	9+54.83	339.81	8	302.05		302.05						22.65	12.08		1.75	14.68	1.5	12.59
Left Shoulder	0+54.60	5+66.07	511.47	3	170.49		170.49						12.79	6.82		1.75	8.29	1.5	7.1
TOTALS CARRIED TO SHEET NO. 15.						1248.11	1248.11	9309.70		312.03		208.02	791.83	422.32	499.24		513.23		439.92

ESTIMATED QUANTITIES

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LOCATION	STATION		LENGTH * CADD Generated	WIDTH	AREA * CADD Generated	ITEM 202	ITEM 204	ITEM 254	ITEM 302		ITEM 304		ITEM 407	ITEM 407	ITEM 408	ITEM 442		ITEM 442	
	PAVEMENT REMOVED	SUBGRADE COMPACTION				PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	THICKNESS	ASPHALT CONCRETE BASE, PG64-22	THICKNESS	AGGREGATE BASE	TACK COAT (AT 0.075 GAL./S.Y.)	TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.)	PRIME COAT, AS PER PLAN (AT 0.4 GAL./S.Y.)	THICKNESS	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) AS PER PLAN		
	FROM	TO	FT.	FT.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	INCH	CU.YD.	INCH	CU.YD.	GALLON	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.
C.R. 4 INTERCHANGE																			
RAMP 'N'																			
	6+18.17	16+98.30	1080.13	16	1920.23			1920.23					144.02	76.81		1.75	93.35	1.5	80.01
	16+98.30	17+45.74	47.44	Varies	157.71 *			157.71					11.83	6.31		1.75	7.67	1.5	6.57
Right Shoulder	0+00	5+18.17	518.17	8	460.6			460.6					34.55	18.42		1.75	22.39	1.5	19.19
Right Shoulder	5+18.17	5+58.17	40	7 avg.	31.11			31.11					2.33	1.24		1.75	1.51	1.5	1.3
Right Shoulder	5+58.17	16+98.30	1140.13	6	760.09			760.09					57.01	30.40		1.75	36.95	1.5	31.67
Right Shoulder	16+98.30	17+45.74	70.6 *	6	47.07			47.07					3.53	1.88		1.75	2.29	1.5	1.96
Left Shoulder	6+18.17	16+98.30	1080.13	3	360.04			360.04					27	14.40		1.75	17.50	1.5	15
Left Shoulder	16+98.30	17+45.74	61.5 *	3	20.5			20.5					1.54	0.82		1.75	1	1.5	0.85
RAMP 'Q'																			
	3+70.13	16+00	1229.87	16	2186.44			2186.44					163.98	87.46		1.75	106.29	1.5	91.1
Right Shoulder	0+00	3+58.89	358.89	8	319.01			319.01					23.93	12.76		1.75	15.51	1.5	13.29
Right Shoulder	3+58.89	4+58.89	100	7 avg.	77.78			77.78					5.83	3.11		1.75	3.78	1.5	3.24
Right Shoulder	4+58.89	16+00	1141.11	6	760.74			760.74					57.06	30.43		1.75	36.98	1.5	31.7
Left Shoulder	3+70.13	16+00	1229.87	3	409.96			409.96					30.75	16.40		1.75	19.93	1.5	17.08
RAMP 'S'																			
	0+12	0+52.02	40.02	Varies	133.52 *			133.52					10.01	5.34		1.75	6.49	1.5	5.56
	0+52.02	7+35.15	683.13	16	1214.45			1214.45					91.08	48.58		1.75	59.04	1.5	50.6
Right Shoulder	0+12	0+52.02	57.5 *	6	38.33			38.33					2.88	1.53		1.75	1.86	1.5	1.6
Right Shoulder	0+52.02	6+44.38	592.36	6	394.91			394.91					29.62	15.8		1.75	19.2	1.5	16.45
Right Shoulder	6+44.38	7+44.38	100	7 avg.	77.78			77.78					5.83	3.11		1.75	3.78	1.5	3.24
Right Shoulder	7+44.38	11+03.27	358.89	8	319.01			319.01					23.93	12.76		1.75	15.51	1.5	13.29
Left Shoulder	0+12	0+52.02	55.3 *	3	18.43			18.43					1.38	0.74		1.75	0.9	1.5	0.77
Left Shoulder	0+52.02	7+35.15	683.13	3	227.71			227.71					17.08	9.11		1.75	11.07	1.5	9.49
RAMP 'T'																			
	0+12.55	0+83.90	71.35	Varies	273.2 *			273.2					20.49	10.93		1.75	13.28	1.5	11.38
	0+83.90	7+80.23	696.33	16	1237.92			1237.92					92.84	49.52		1.75	60.18	1.5	51.58
Right Shoulder	0+12.55	0+83.90	91.8 *	6	61.2	61.2	61.2		9	15.3	6	10.2	4.59	2.45	24.48	1.75	2.98	1.5	2.55
Right Shoulder	0+83.90	8+40.23	756.33	6	504.22	504.22	504.22		9	126.06	6	84.04	37.82	20.17	201.69	1.75	24.51	1.5	21.01
Right Shoulder	8+40.23	8+80.23	40	7 avg.	31.11	31.11	31.11		9	7.78	6	5.19	2.33	1.24	12.44	1.75	1.51	1.5	1.3
Right Shoulder	8+80.23	13+78.71	498.48	8	443.09	443.09	443.09		9	110.77	6	73.85	33.23	17.72	177.24	1.75	21.54	1.5	18.46
Left Shoulder	0+12.55	0+83.90	91.5 *	3	30.5			30.5					2.29	1.22		1.75	1.48	1.5	1.27
Left Shoulder	0+83.90	7+80.23	696.33	3	232.11			232.11					17.41	9.28		1.75	11.28	1.5	9.67
TOTALS CARRIED BELOW						1039.62	1039.62	11,709.15		259.91		173.28	956.17	509.94	415.85		619.76		531.18
TOTALS FROM SHEET NO. 12						8256.05	8256.05	74,004.96		2064		1376	6169.57	3290.45	3302.42		3998.82		3427.56
TOTALS FROM SHEET NO. 13						8257.18	8257.18	70,603.26		2064.28		1376.20	5914.55	3154.42	3302.87		3833.50		3285.87
TOTALS FROM SHEET NO. 14						1248.11	1248.11	9309.70		312.03		208.02	791.83	422.32	499.24		513.23		439.92
TOTALS FROM THIS SHEET ABOVE						1039.62	1039.62	11,709.15		259.91		173.28	956.17	509.94	415.85		619.76		531.18
TOTALS CARRIED TO GENERAL SUMMARY						18,800.96	18,800.96	165,627.07		4700.22		3133.50	13,832.12	7377.13	7520.38		8965.31		7684.53

CALCULATED
RDA
CHECKED
TES

ESTIMATED QUANTITIES

HAS - 22 - 21.47

15
36

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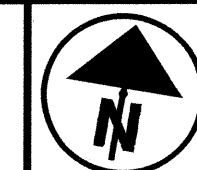
REF. NO.	PLAN SHEET NO.	STATION		SIDE	202				606										617			626		COMMENTS	SEE SHEET NO.
					PAVEMENT REMOVED	GUARDRAIL REMOVED, AS PER PLAN	GUARDRAIL TYPE 5	GUARDRAIL BARRIER DESIGN, TYPE 5	ANCHOR ASSEMBLY TYPE				BRIDGE TERMINAL ASSEMBLY, TYPE		IMPACT ATTENUATOR, TYPE I-98 (BIDIRECTIONAL)	2" COMPACTED AGGREGATE, AS PER PLAN			BARRIER REFLECTOR TYPE						
									A	E-98	T	B-98	1	2		EA.	LENGTH	WIDTH		CU. YD.	A				
SQ. YD.	FT.	FT.	FT.	EA.	EA.	EA.				EA.	EA.				EA.										
25-GR	22	15+88.50 'O'	297+43.28 C.R. 4	RT.	100	225	150		1	1						225	4	5.56	3						
26-GR	22	1242+53.07	1247+65.57	LT.	227.78	512.5	500			1						512.5	4	12.65	6	Connect to existing guardrail					
27-GR	22	NO WORK		RT.																					
28-GR	22	1238+63.70	1247+88.70	RT.	411.11	925	875		1							925	4	22.84	10	Connect to existing guardrail					
29-GR	22	1250+36.85	1255+11.85	LT.	211.11	475	425		1							475	4	11.73	6	Connect to existing guardrail					
30-GR	22	NO WORK		LT.																					
31-GR	22	1250+59.68	1256+22.18	RT.	250	562.5	550			1						562.5	4	13.89	7	Connect to existing guardrail					
32-GR	22	1256+87.50	1258+48.75	LT.	72.22	162.5	100		1	1						162.5	4	4.01	3						
33-GR	22	1256+87.50	1258+50	LT.	72.22	162.5	100		1	1						162.5	4	4.01	3						
34-GR	22 & 23	1258+90	1265+52.50	RT.	294.44	662.5	600		1	1						662.5	4	16.36	8						
35-GR	23	1260+00	1263+75	LT.	166.67	375	312.5		1	1						375	4	9.26	5						
36-GR	23	1279+71	1282+05.79	RT.	100	225	162.5		1	1						225	4	5.56	3						
37-GR	23	1281+40	1283+40	LT.	88.89	200	137.5		1	1						200	4	4.94	3						
38-GR	24	1291+67.89	1300+30.30	LT.	377.78	850	837.5				1					850	4	20.99	10						
39-GR	24	1299+05.40	1300+30.40	RT.		125	118.75	137.5				1		1					4	See Std. Dwg. GR-6.1 (Design A)					
40-GR	24	1290+87.90	1300+40.20	RT.	427.78	962.5	912.5		1							962.5	4	23.77	11						
41-GR	24	1301+63.40	1303+84	LT.	44.44	225	187.5			1				1		100	4	2.47	3	See Std. Dwg. GR-5.1 & GR-5.2					
42-GR	24	1301+72.70	1302+97.70	LT.		125	118.75	137.5				1		1					4	See Std. Dwg. GR-6.1 (Design A)					
43-GR	24	1302+01.70	1303+52	RT.	66.67	150		137.5			1			1		150	4	3.70	3						
44-GR	25	1322+53	1323+76	RT.	55.56	125	62.5		1	1						125	4	3.09	3						
TOTALS FROM PREVIOUS SHEET					4076.19	10,293.75	8837.5	500		17	16			6	4				4	233.94	132				
TOTALS FROM THIS SHEET					2966.67	7050	6150	412.5	1	11	11	1		4	2				2	164.83	95				
TOTALS GENERAL SUMMARY					7042.86	17,343.75	14,987.5	912.5	1	28	27	1		10	6				6	398.77	227				

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ESTIMATED QUANTITIES

HAS - 22 - 21.47

18
 36



CALCULATED
RDA
CHECKED
TES

PLAN SHEET
STA. 1118+00 TO STA. 1150+00

HAS-22-21.47

U.S. 22 WESTBOUND LANES
P.I. STA. 1137+02.97, 20' RT.
of STA. 1137+02.97, @ U.S. 22
 $\Delta = 6^\circ 05' 00''$ (LT)
 $Dc = 1^\circ 30' 00''$
 $R = 3819.72'$
 $L = 405.56'$
 $T = 202.97'$
 $E = 5.39'$

U.S. 22 WESTBOUND LANES
P.I. STA. 1143+06.51, 44' LT.
of STA. 1143+03.49, @ U.S. 22
 $\Delta = 6^\circ 05' 00''$ (RT)
 $Dc = 1^\circ 00' 00''$
 $R = 5729.58'$
 $L = 608.33'$
 $T = 304.45'$
 $E = 8.08'$

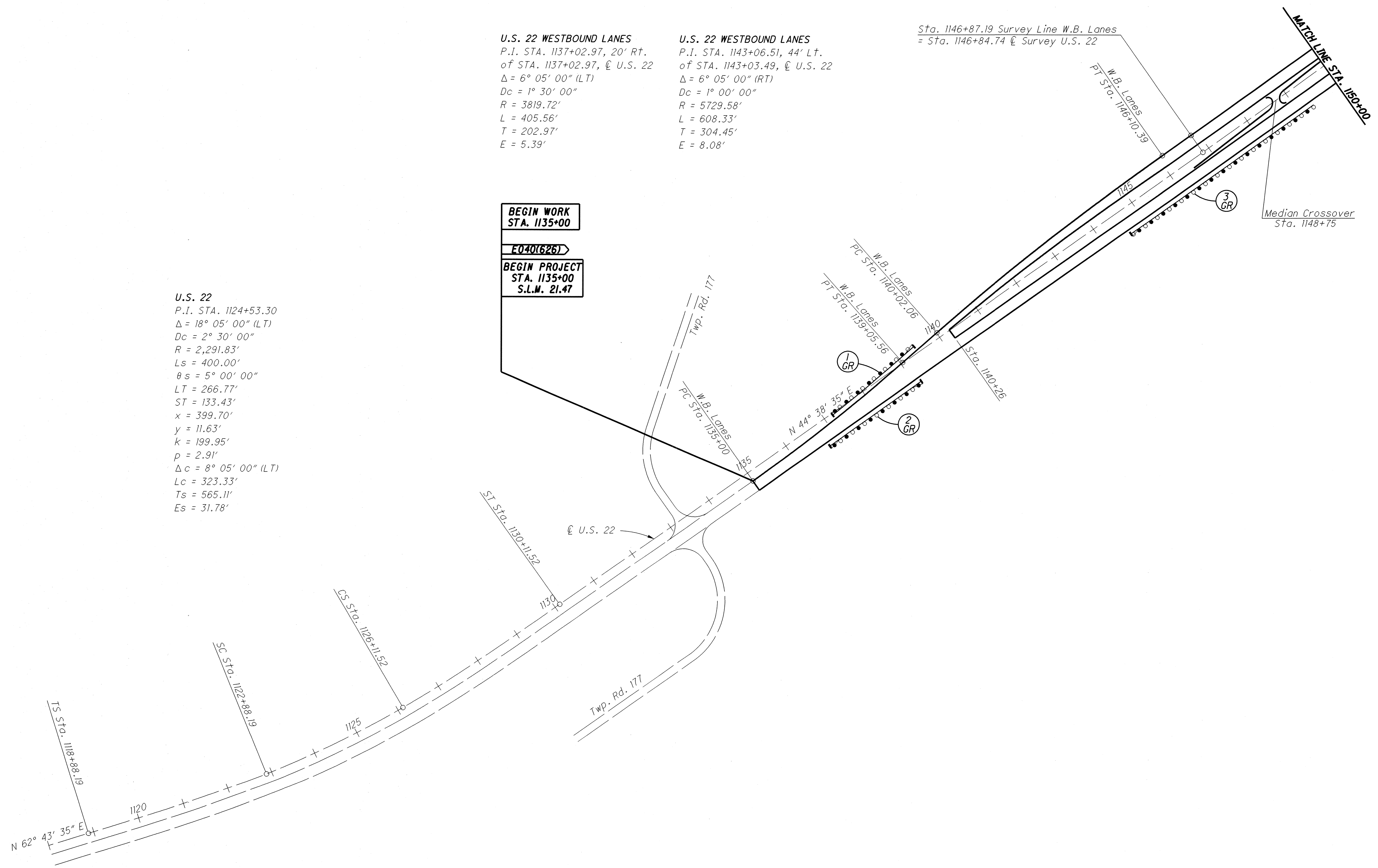
Sta. 1146+87.19 Survey Line W.B. Lanes
= Sta. 1146+84.74 @ Survey U.S. 22

U.S. 22
P.I. STA. 1124+53.30
 $\Delta = 18^\circ 05' 00''$ (LT)
 $Dc = 2^\circ 30' 00''$
 $R = 2,291.83'$
 $Ls = 400.00'$
 $\theta s = 5^\circ 00' 00''$
 $LT = 266.77'$
 $ST = 133.43'$
 $x = 399.70'$
 $y = 11.63'$
 $k = 199.95'$
 $p = 2.91'$
 $\Delta c = 8^\circ 05' 00''$ (LT)
 $Lc = 323.33'$
 $Ts = 565.11'$
 $Es = 31.78'$

BEGIN WORK
STA. 1135+00

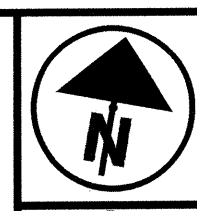
E040(626)

BEGIN PROJECT
STA. 1135+00
S.L.M. 21.47



Median Crossover
Sta. 1148+75

FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.
FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 34-36.



CALCULATED
RDA
CHECKED
TES

0 100 200
HORIZONTAL
SCALE IN FEET

PLAN SHEET
STA. 1150+00 TO STA. 1177+00

HAS-22-21.47

20
36

RAMP 'K'
P.C. STA. 1+75
P.T. STA. 10+62.57
 $\Delta = 221^\circ 53' 37''$
 $Dc = 25^\circ 00''$
 $R = 229.18'$
 $L = 887.57'$

RAMP 'J'
P.I. STA. 6+01.20
84.08' Lt. of \odot Survey, Sta. 1163+34.27
 $\Delta = 26^\circ 30' (LT)$
 $Dc = 25^\circ 00''$
 $R = 229.18'$
 $T = 53.97'$
 $L = 106.00'$
 $E = 6.27'$

S.R. 151 - Spiral Data
P.I. STA. 248+45.27
 $Dc = 11^\circ 30''$
 $\theta s = 23^\circ 00'$
 $Ls = 400'$
 $L.T. = 268.95'$
 $S.T. = 135.42'$
 $Xc = 393.60'$
 $Yc = 52.91'$

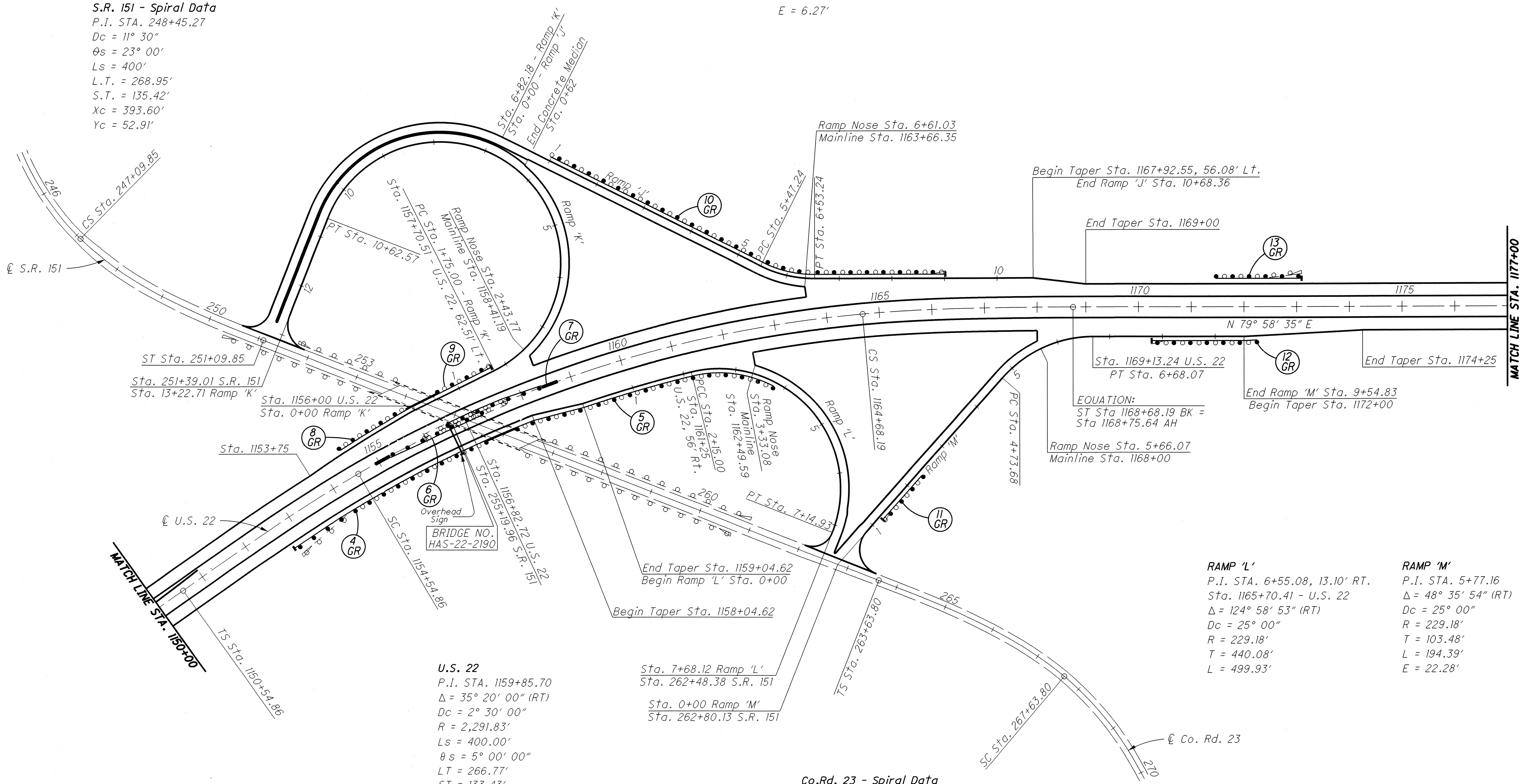
RAMP 'L'
P.I. STA. 6+55.08, 13.10' RT.
Sta. 1165+70.41 - U.S. 22
 $\Delta = 124^\circ 58' 53'' (RT)$
 $Dc = 25^\circ 00''$
 $R = 229.18'$
 $T = 440.08'$
 $L = 499.93'$

RAMP 'M'
P.I. STA. 5+77.16
 $\Delta = 48^\circ 35' 54'' (RT)$
 $Dc = 25^\circ 00''$
 $R = 229.18'$
 $T = 103.48'$
 $L = 194.39'$
 $E = 22.28'$

U.S. 22
P.I. STA. 1159+85.70
 $\Delta = 35^\circ 20' 00'' (RT)$
 $Dc = 2^\circ 30' 00''$
 $R = 2,291.83'$
 $Ls = 400.00'$
 $\theta s = 5^\circ 00' 00''$
 $LT = 266.77'$
 $ST = 133.43'$
 $x = 399.70'$
 $y = 11.63'$
 $k = 199.95'$
 $p = 2.91'$
 $\Delta c = 25^\circ 20' 00'' (RT)$
 $Lc = 1,013.33'$
 $Ts = 930.84'$
 $Es = 116.53'$

Co.Rd. 23 - Spiral Data
P.I. STA. 266+31.82
 $Dc = 9^\circ 30'$
 $\theta s = 19^\circ 00'$
 $Ls = 400'$
 $L.T. = 268.22'$
 $S.T. = 134.75'$
 $Xc = 395.62'$
 $Yc = 43.87'$

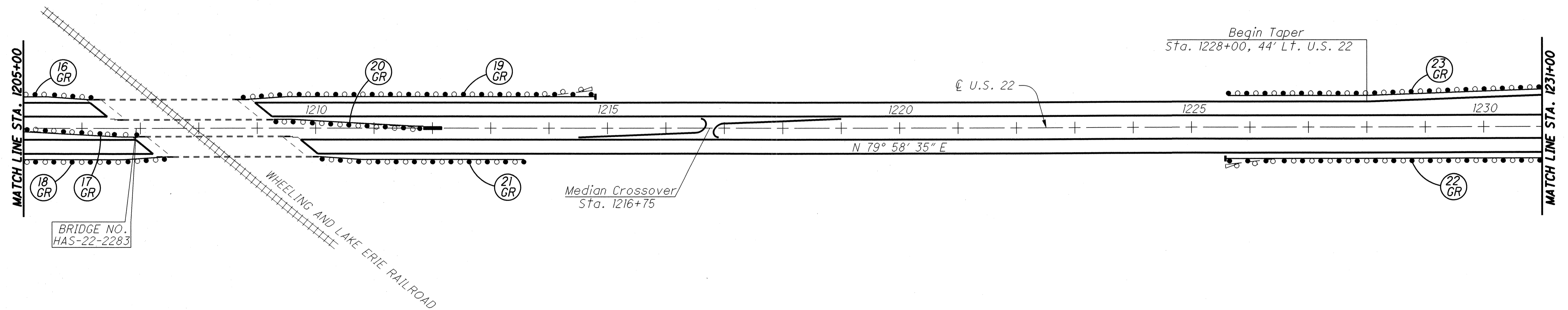
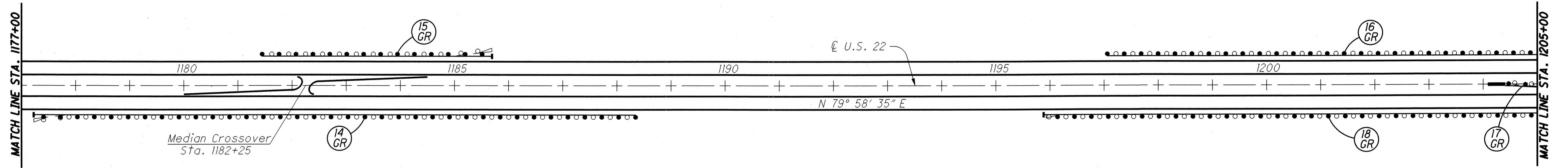
EQUATION:
ST Sta 1168+68.19 BK =
Sta 1168+75.64 AH



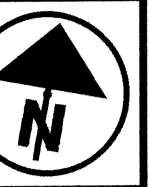
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FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.
FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 34-36.

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FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.
 FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 34-36.

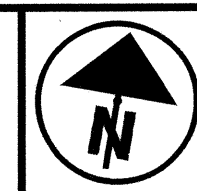


CALCULATED
 RDA
 CHECKED
 TES

PLAN SHEET
 STA. 1177+00 TO STA. 1231+00

HAS-22-21.47

21
 36



0 50 100 200
 HORIZONTAL
 SCALE IN FEET

CALCULATED
 RDA
 CHECKED
 TES

PLAN SHEET
 STA. 1231+00 TO STA. 1260+00

HAS-22-21.47

22
 36

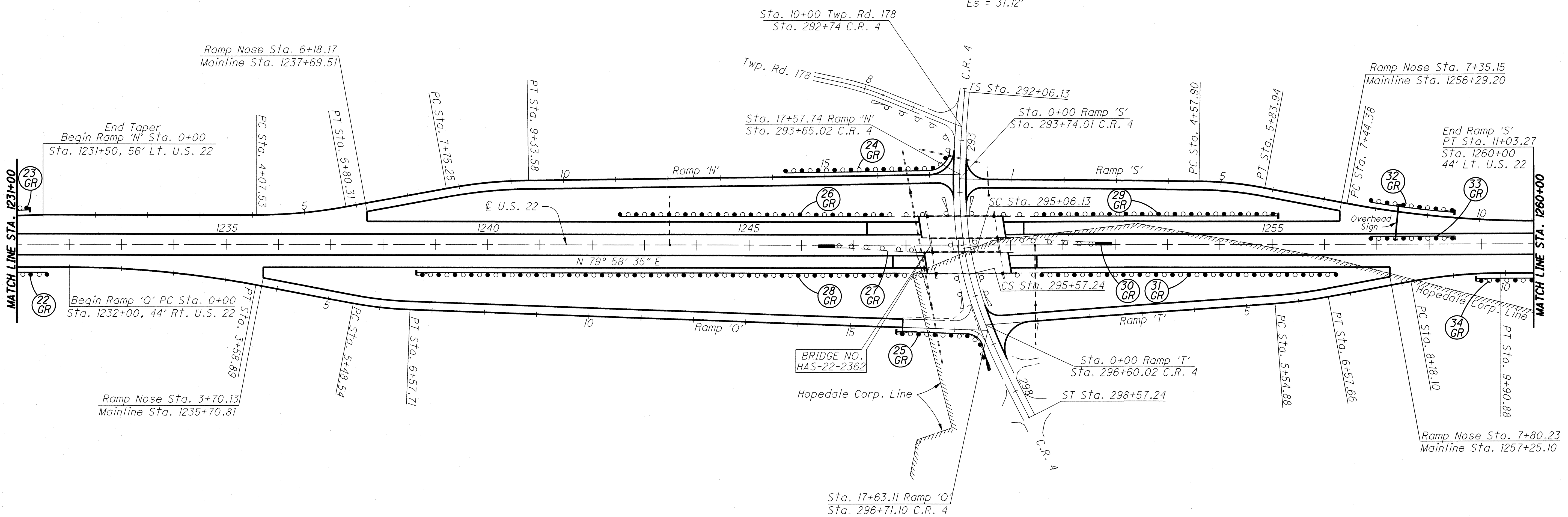
Ramp 'N'
 P.I. Sta. 4+94.16 Ramp 'N' =
 56' Lt. Sta. 1236+44.16 U.S. 22
 $\Delta = 10^\circ 22' 00''$ (LT)
 $Dc = 6^\circ 00' 00''$
 $R = 954.93'$
 $T = 86.63'$
 $L = 172.78'$
 $E = 3.92'$

Ramp 'N'
 P.I. Sta. 8+54.60
 $\Delta = 9^\circ 30' 00''$ (RT)
 $Dc = 6^\circ 00' 00''$
 $R = 954.93'$
 $T = 79.35'$
 $L = 158.33'$
 $E = 3.27'$

C.R. 4
 P.I. Sta. 295+37.67
 $\Delta = 31^\circ 36' 00''$ (LT)
 $Dc = 9^\circ 00' 00''$
 $R = 636.62'$
 $Ls = 300.00'$
 $Theta = 13^\circ 30' 00''$
 $LT = 200.58'$
 $ST = 100.53'$
 $x = 298.34'$
 $y = 23.47'$
 $k = 149.72'$
 $p = 5.88'$
 $\Delta c = 4^\circ 36' 00''$ (LT)
 $Lc = 51.11'$
 $Ts = 331.54'$
 $Es = 31.12'$

Ramp 'S'
 P.I. Sta. 5+21.08
 $\Delta = 10^\circ 05' 00''$ (RT)
 $Dc = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 63.18'$
 $L = 126.04'$
 $E = 2.78'$

Ramp 'S'
 P.I. Sta. 9+24.35
 $\Delta = 10^\circ 46' 00''$ (LT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 179.97'$
 $L = 358.89'$
 $E = 8.46'$



Ramp 'Q'
 P.I. Sta. 1+79.97
 $\Delta = 10^\circ 46' 00''$ (RT)
 $Dc = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 179.97'$
 $L = 358.89'$
 $E = 8.46'$

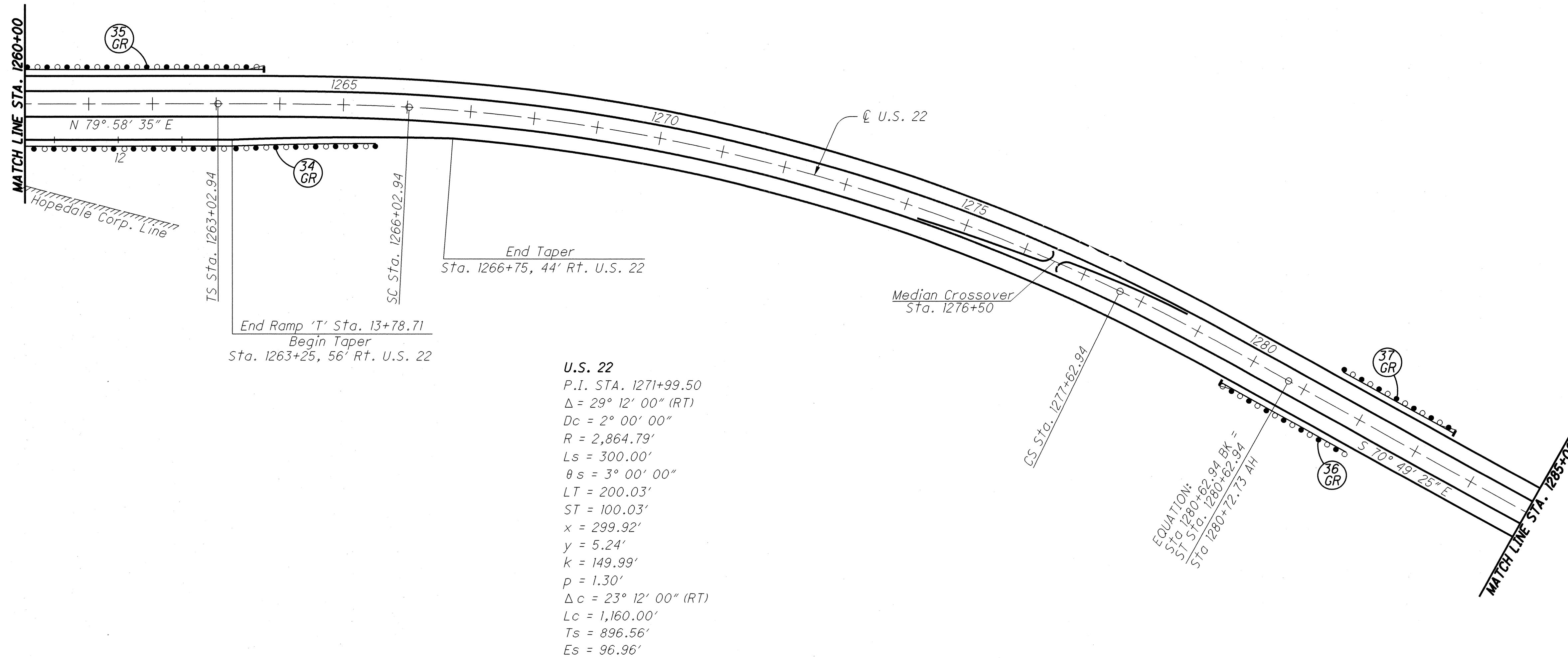
Ramp 'Q'
 P.I. Sta. 6+03.23
 $\Delta = 8^\circ 44' 01''$ (LT)
 $Dc = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 54.69'$
 $L = 109.17'$
 $E = 2.09'$

Ramp 'T'
 P.I. Sta. 6+06.32
 $\Delta = 6^\circ 10' 00''$ (LT)
 $Dc = 6^\circ 00' 00''$
 $R = 954.93'$
 $T = 51.44'$
 $L = 102.78'$
 $E = 1.38'$

Ramp 'T'
 P.I. Sta. 9+04.73
 $\Delta = 10^\circ 22' 00''$ (RT)
 $Dc = 6^\circ 00' 00''$
 $R = 954.93'$
 $T = 86.63'$
 $L = 172.78'$
 $E = 3.92'$

FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.
 FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 34-36.

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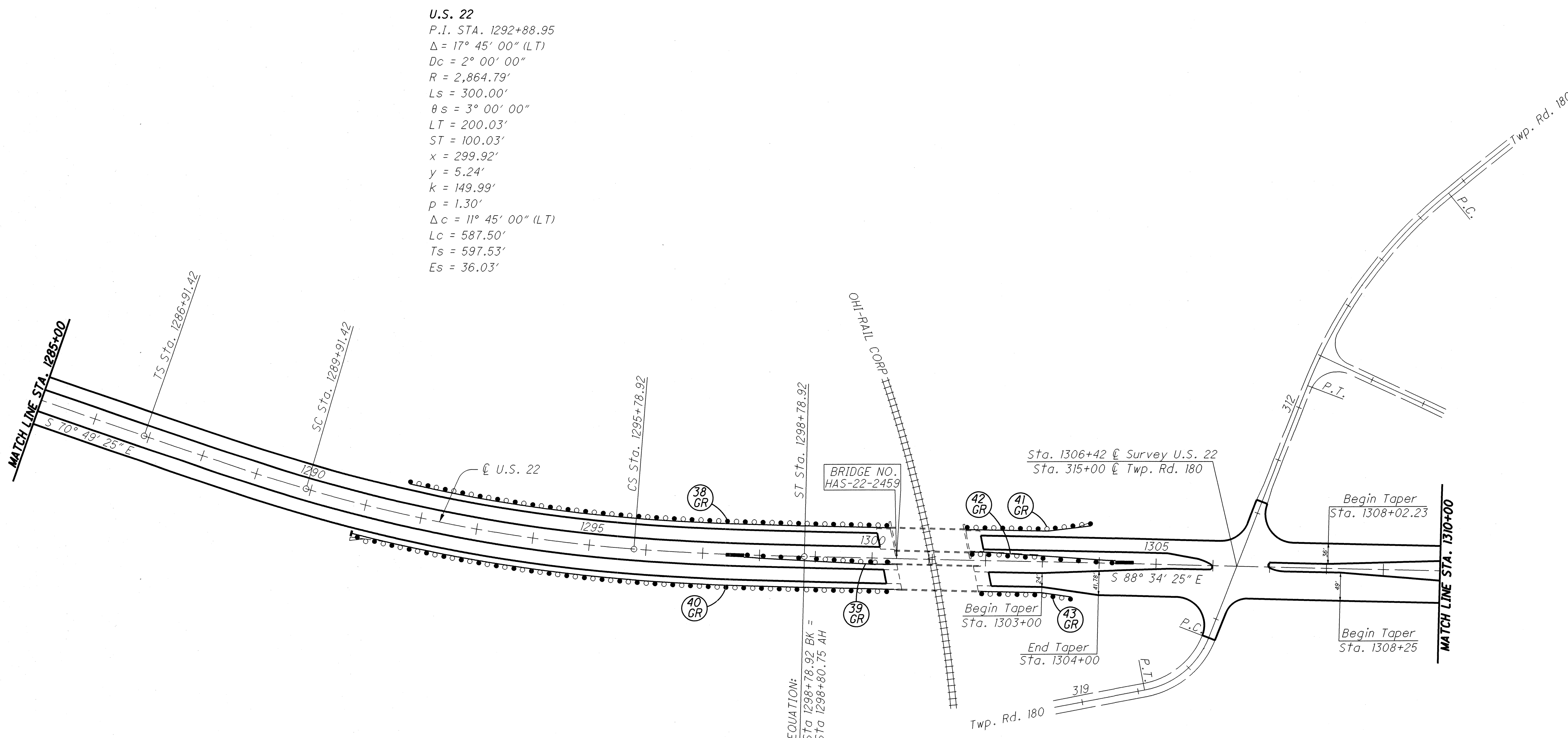
CALCULATED RDA CHECKED TES

HORIZONTAL SCALE IN FEET
 0 100 200

PLAN SHEET
STA. 1260+00 TO STA. 1285+00

HAS-22-21.47

FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.
 FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 34-36.



U.S. 22
 P.I. STA. 1292+88.95
 $\Delta = 17^\circ 45' 00''$ (LT)
 $Dc = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $Ls = 300.00'$
 $\theta s = 3^\circ 00' 00''$
 $LT = 200.03'$
 $ST = 100.03'$
 $x = 299.92'$
 $y = 5.24'$
 $k = 149.99'$
 $p = 1.30'$
 $\Delta c = 11^\circ 45' 00''$ (LT)
 $Lc = 587.50'$
 $Ts = 597.53'$
 $Es = 36.03'$

BRIDGE NO.
HAS-22-2459

EQUATION:
Sta 1298+78.92 BK =
Sta 1298+80.75 AH

Sta. 1306+42 @ Survey U.S. 22
Sta. 315+00 @ Twp. Rd. 180

Begin Taper
Sta. 1308+02.23

Begin Taper
Sta. 1303+00

End Taper
Sta. 1304+00

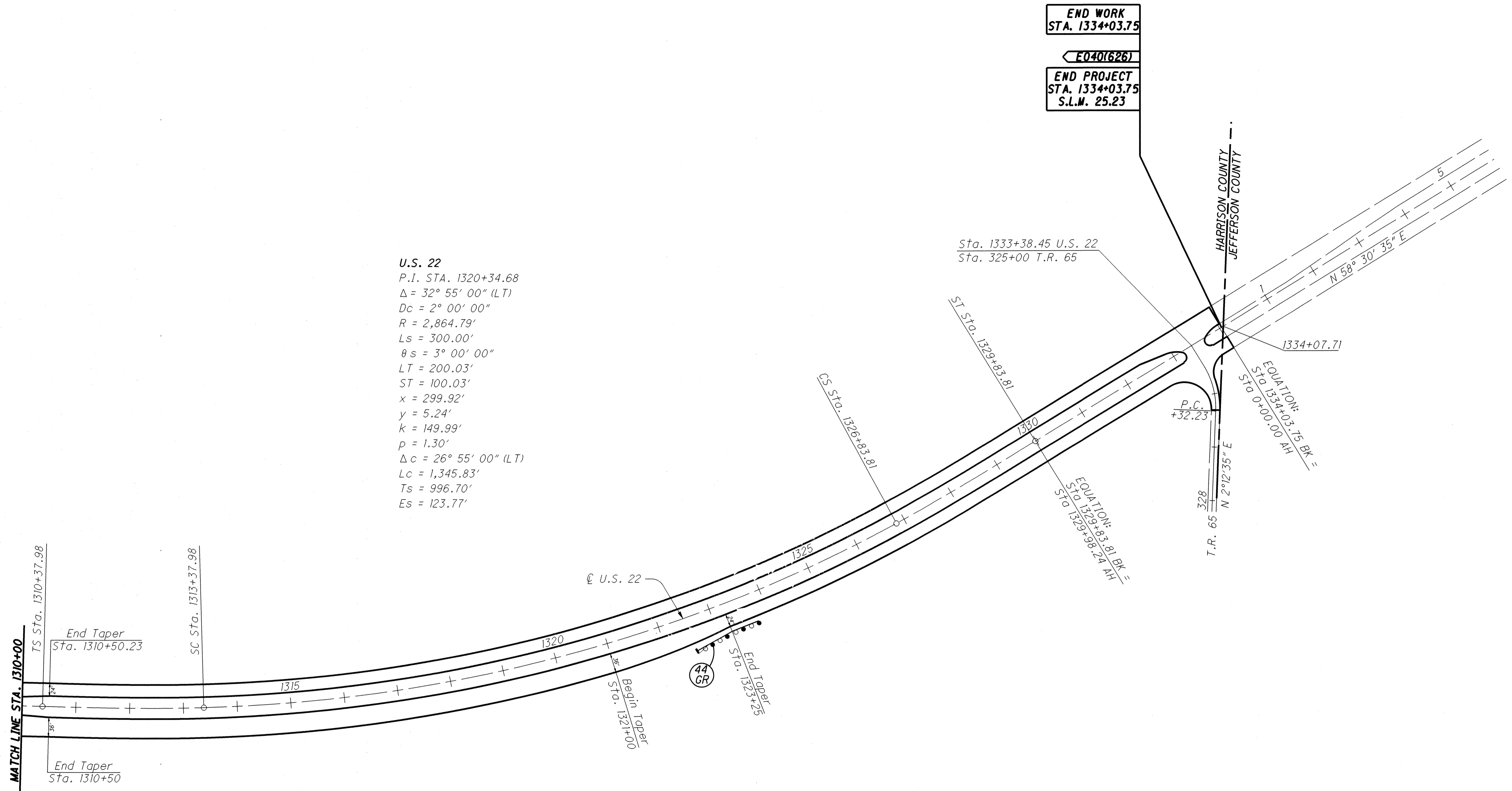
Begin Taper
Sta. 1308+25

FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.
 FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 34-36.

CALCULATED
 RDA
 CHECKED
 TES

PLAN SHEET
STA. 1285+00 TO STA. 1310+00

HAS-22-21.47



U.S. 22
 P.I. STA. 1320+34.68
 $\Delta = 32^\circ 55' 00''$ (LT)
 $Dc = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $Ls = 300.00'$
 $\theta s = 3^\circ 00' 00''$
 $LT = 200.03'$
 $ST = 100.03'$
 $x = 299.92'$
 $y = 5.24'$
 $k = 149.99'$
 $\rho = 1.30'$
 $\Delta c = 26^\circ 55' 00''$ (LT)
 $Lc = 1,345.83'$
 $Ts = 996.70'$
 $Es = 123.77'$

END WORK
 STA. 1334+03.75
 EQ40(626)
 END PROJECT
 STA. 1334+03.75
 S.L.M. 25.23

CALCULATED
 RDA
 CHECKED
 TES

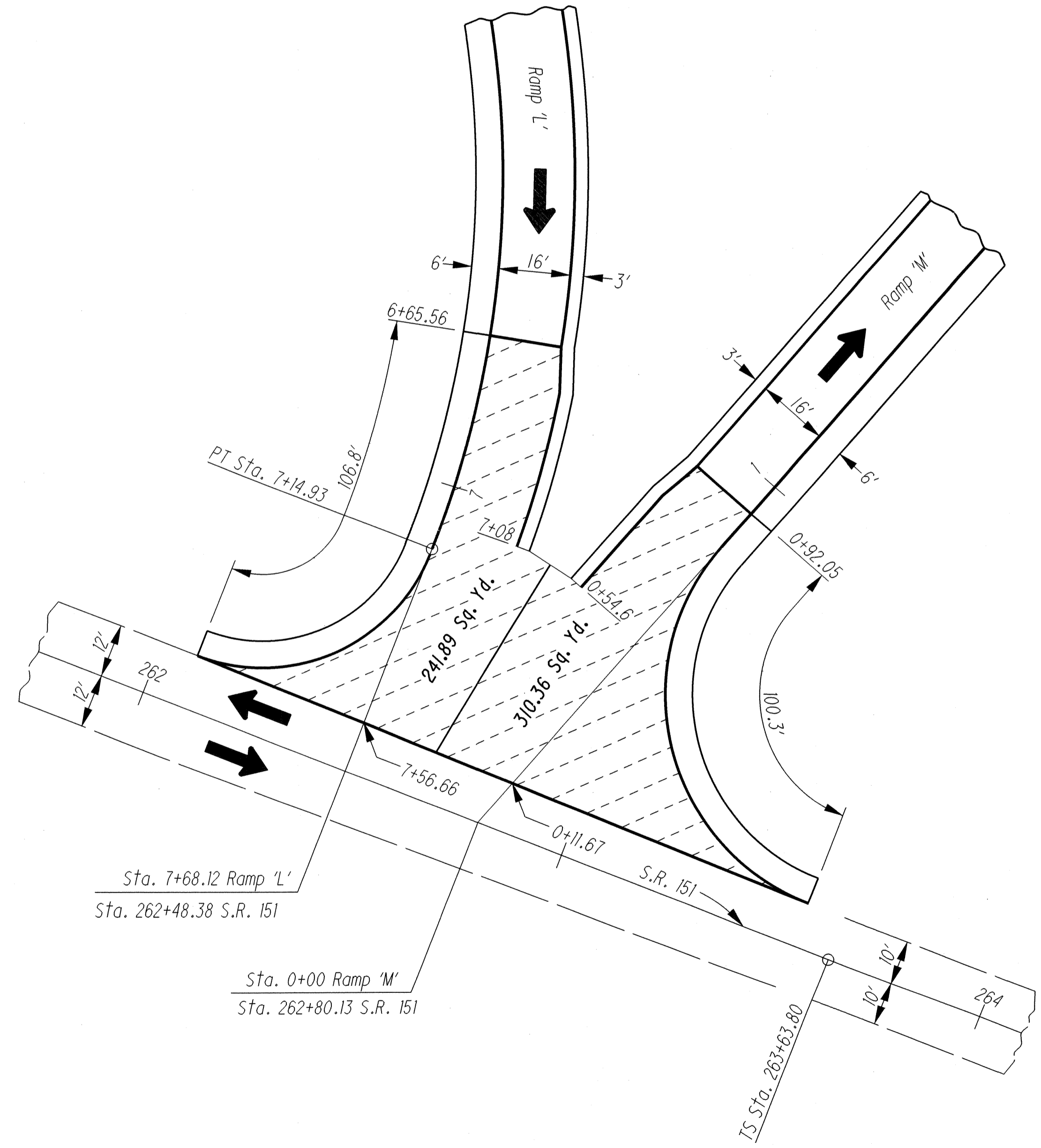
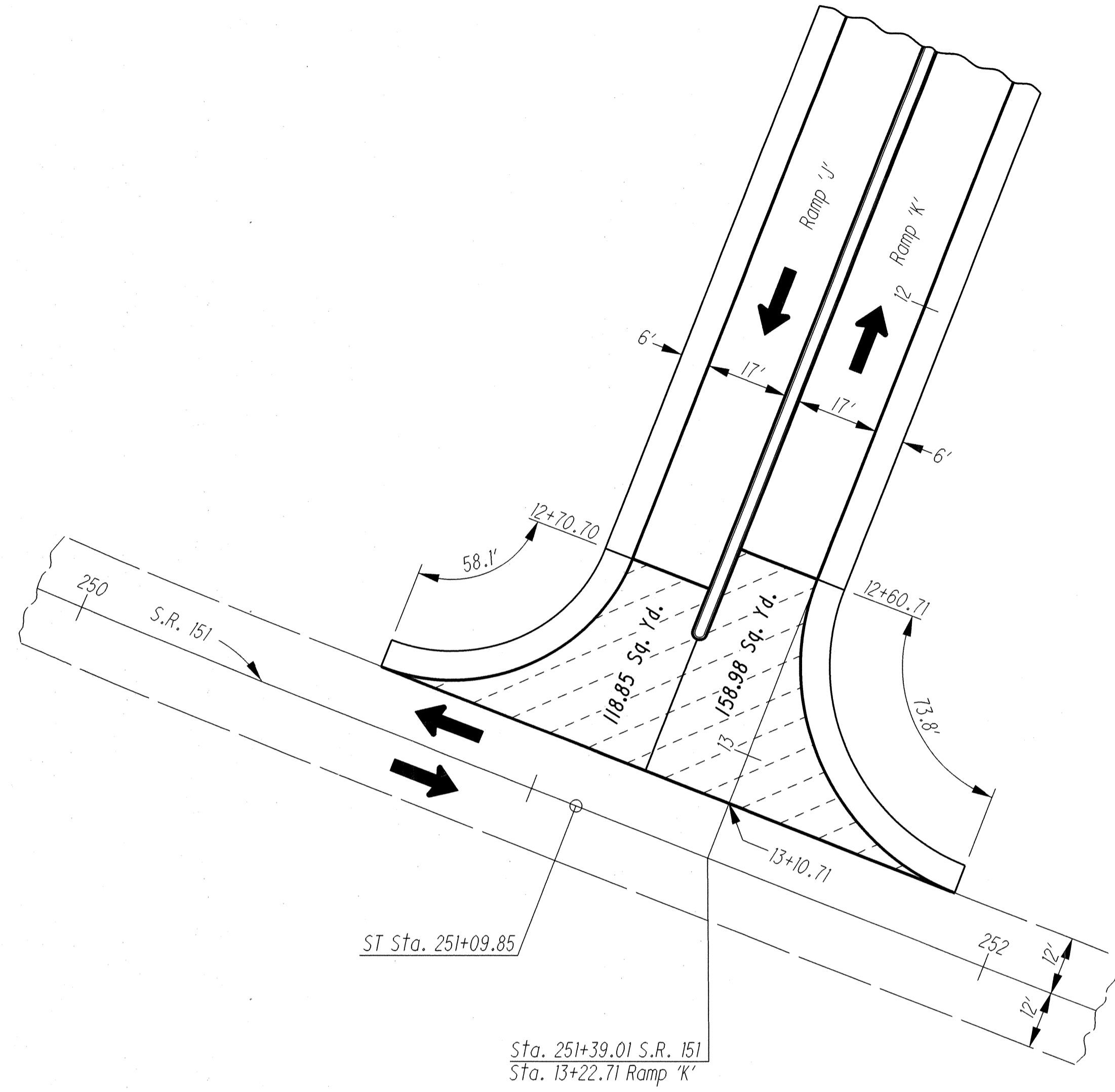
0 100 200
 HORIZONTAL
 SCALE IN FEET

PLAN SHEET
 STA. 1310+00 TO STA. 6+00

HAS-22-21.47

25
 36

FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.
 FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
 FOR TRAFFIC CONTROL QUANTITIES, SEE SHEET NO. 34-36.



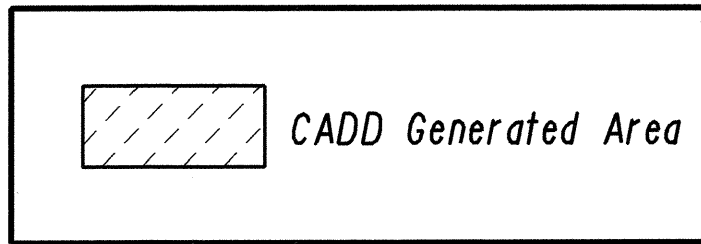
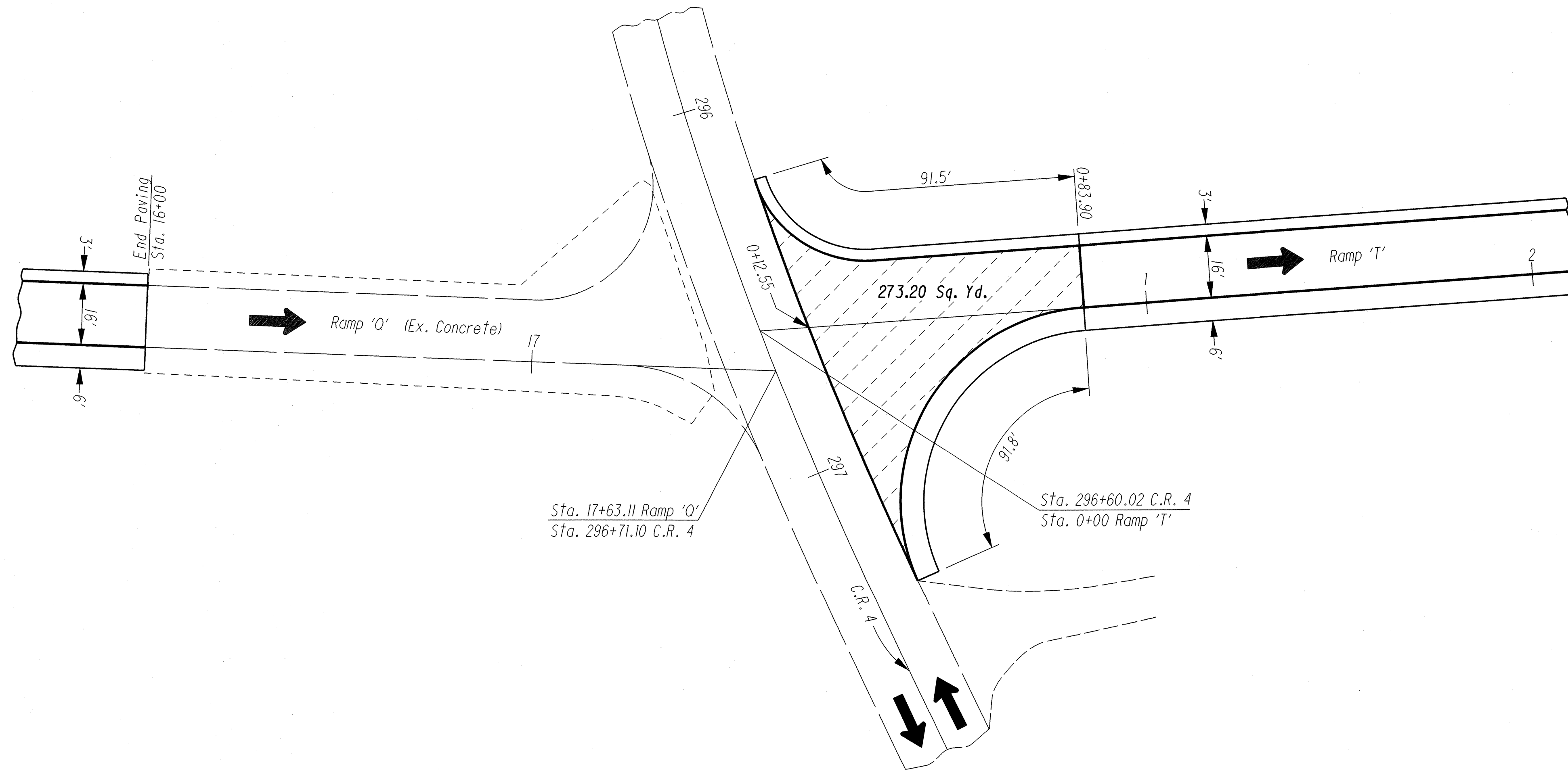
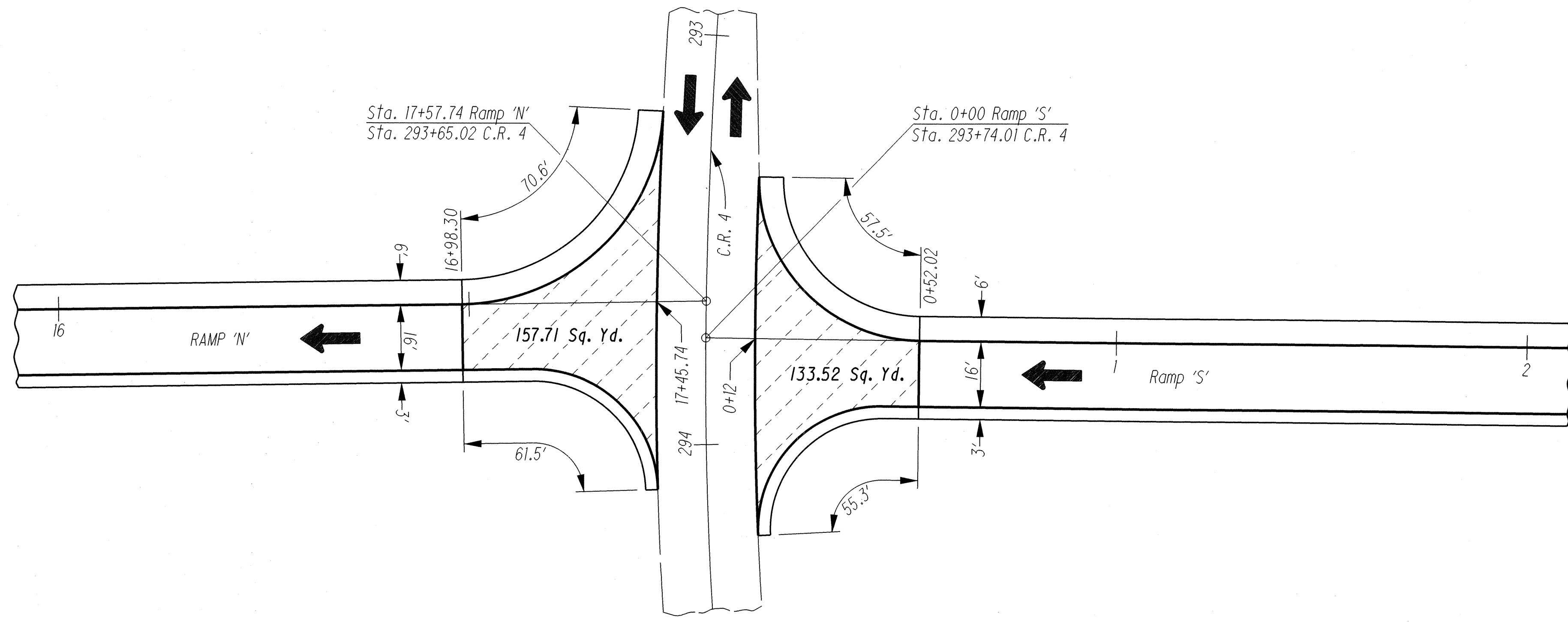
CADD Generated Area

FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.

CALCULATED	RDA	CHECKED	TES
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INTERSECTION DETAILS
S.R. 151 INTERCHANGE

HAS-22-21.47

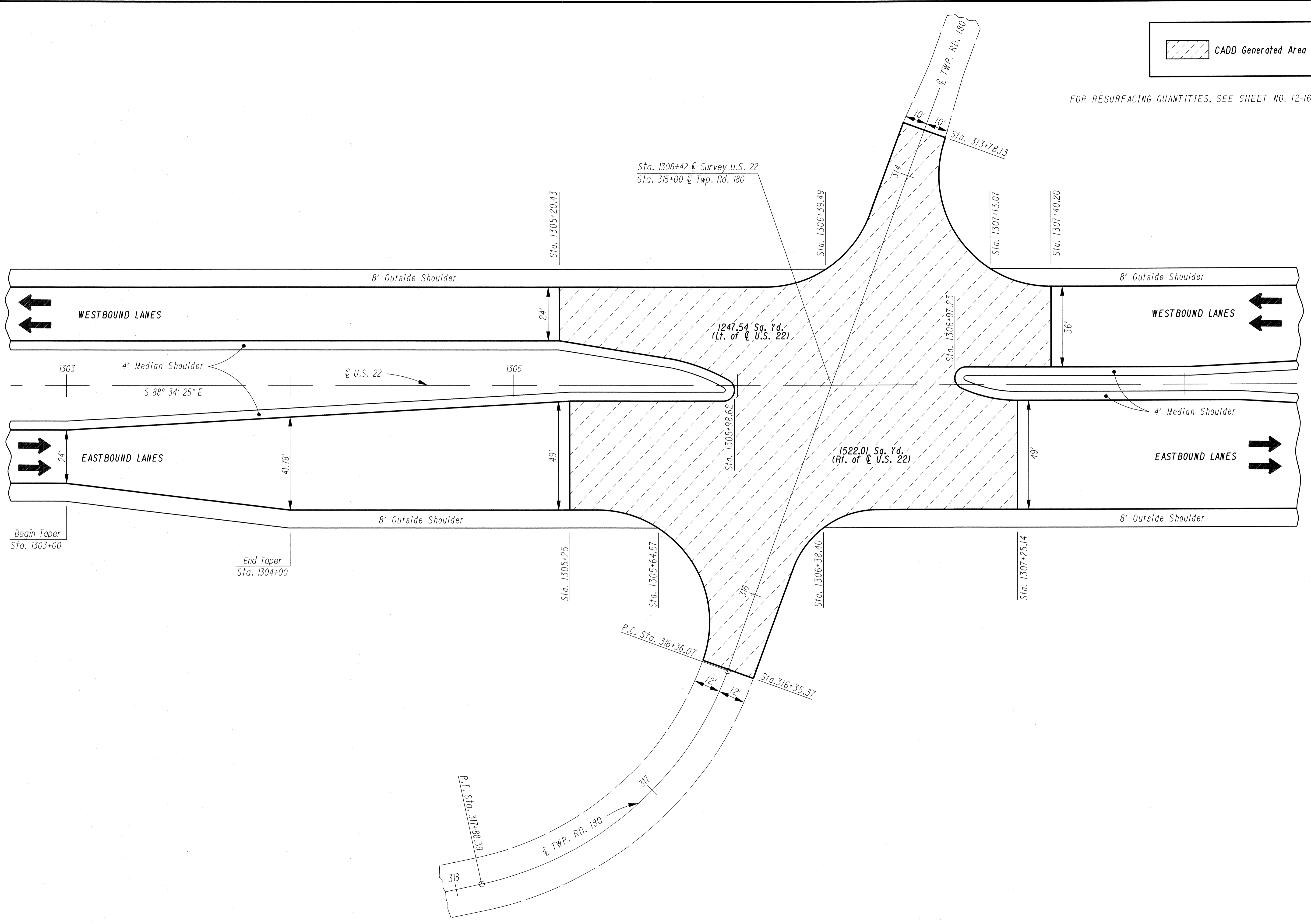


FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.

CALCULATED	0
RDA	10
CHECKED	40
TES	100

**INTERSECTION DETAILS
C.R. 4 INTERCHANGE**

HAS-22-21.47

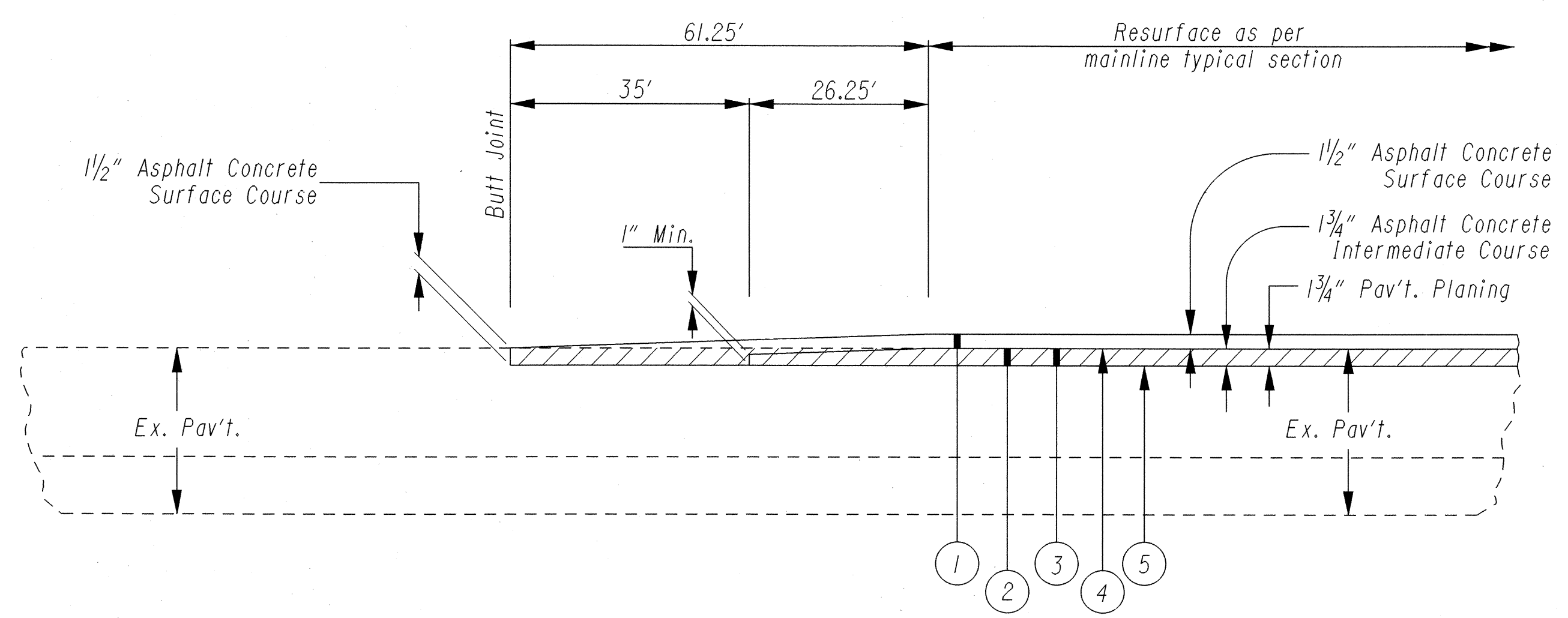


CADD Generated Area

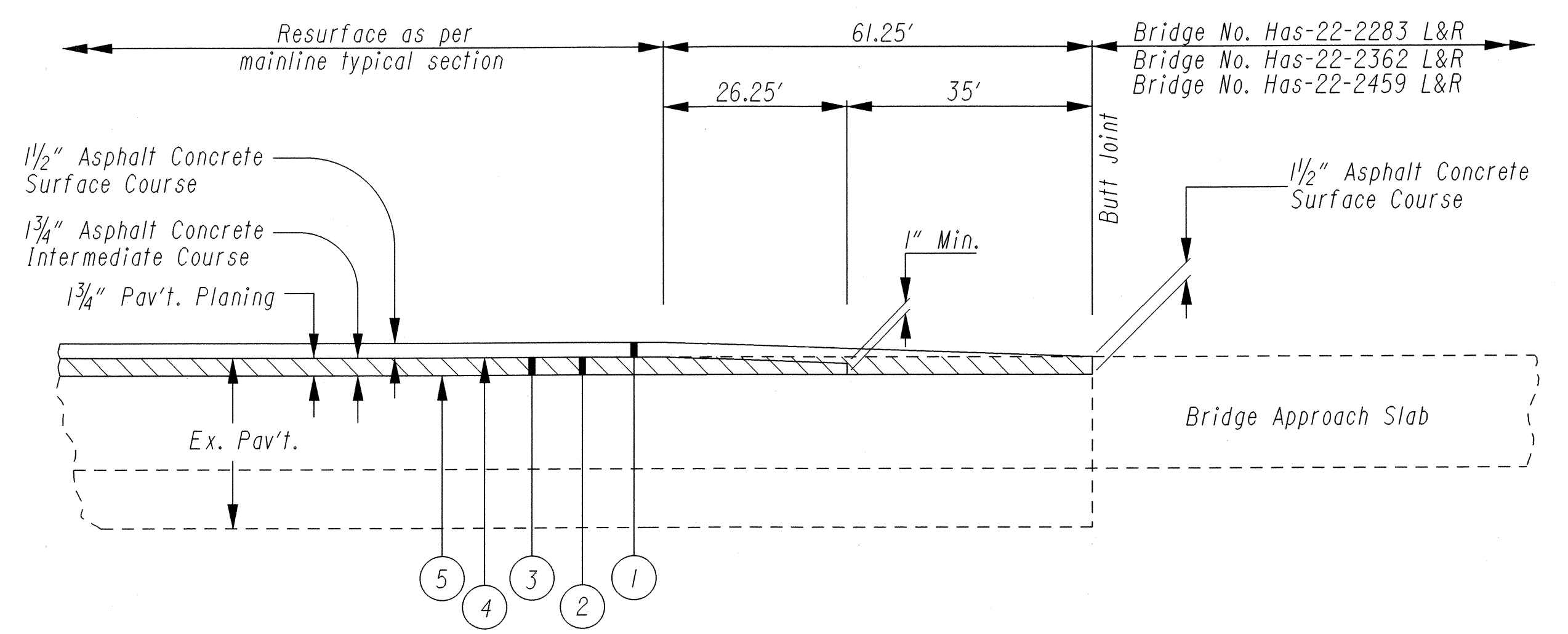
FOR RESURFACING QUANTITIES, SEE SHEET NO. 12-16.

CALCULATED	0
RDA	10
CHECKED	40
TES	

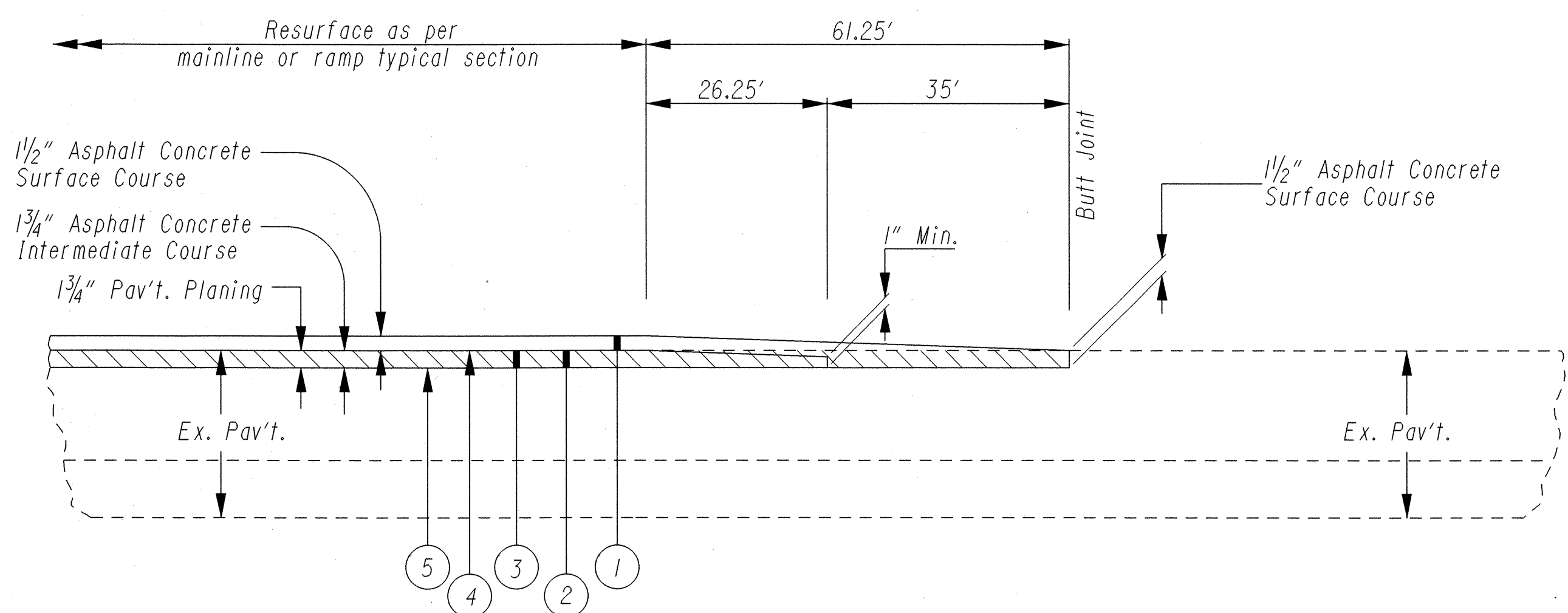
INTERSECTION DETAILS
TWP. RD. 180 INTERSECTION



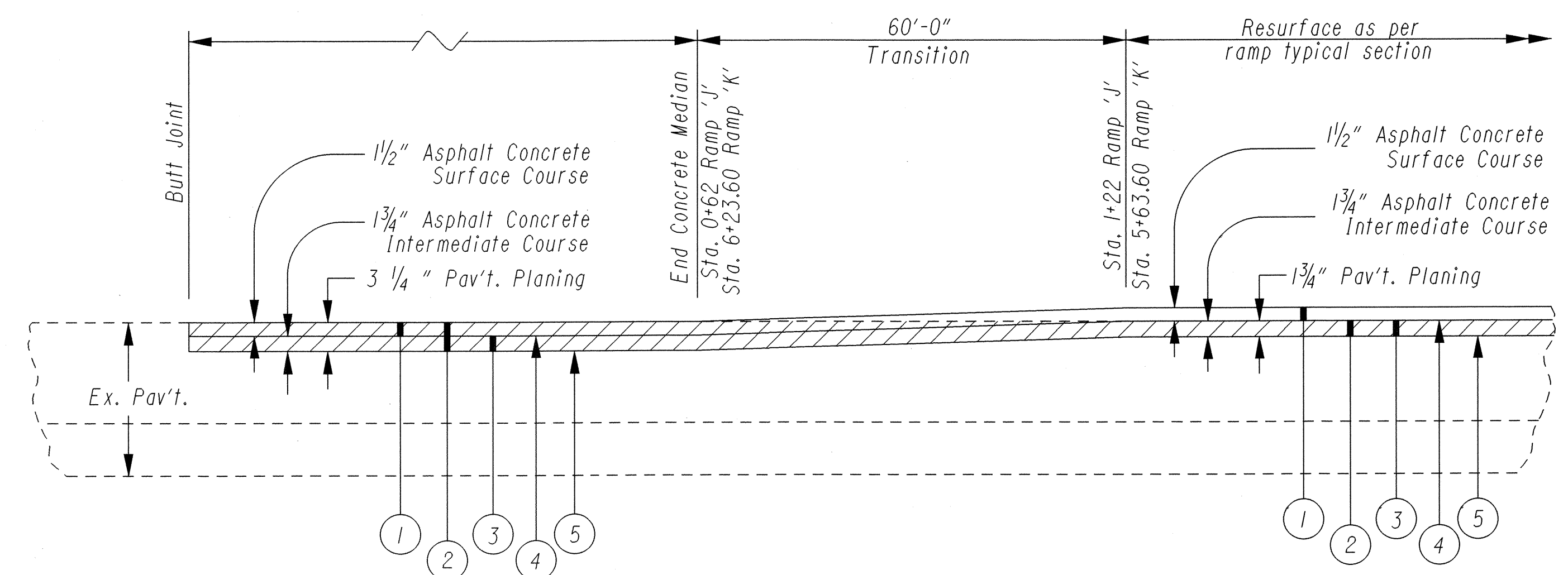
PAVEMENT DETAIL AT BEGINNING AND END OF PROJECT



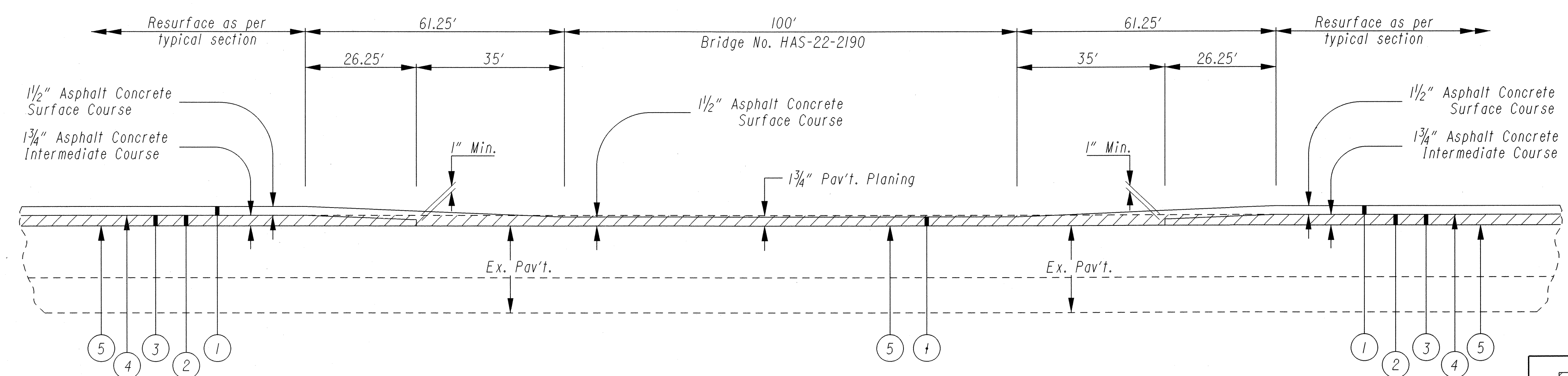
PAVEMENT TRANSITION AT STRUCTURES



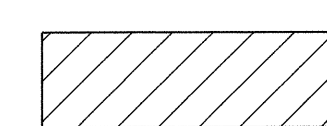
PAVEMENT TRANSITION AT RAMPS 'L', 'M', 'N', 'Q', 'S', 'T', T.R. 180, AND T.R. 65



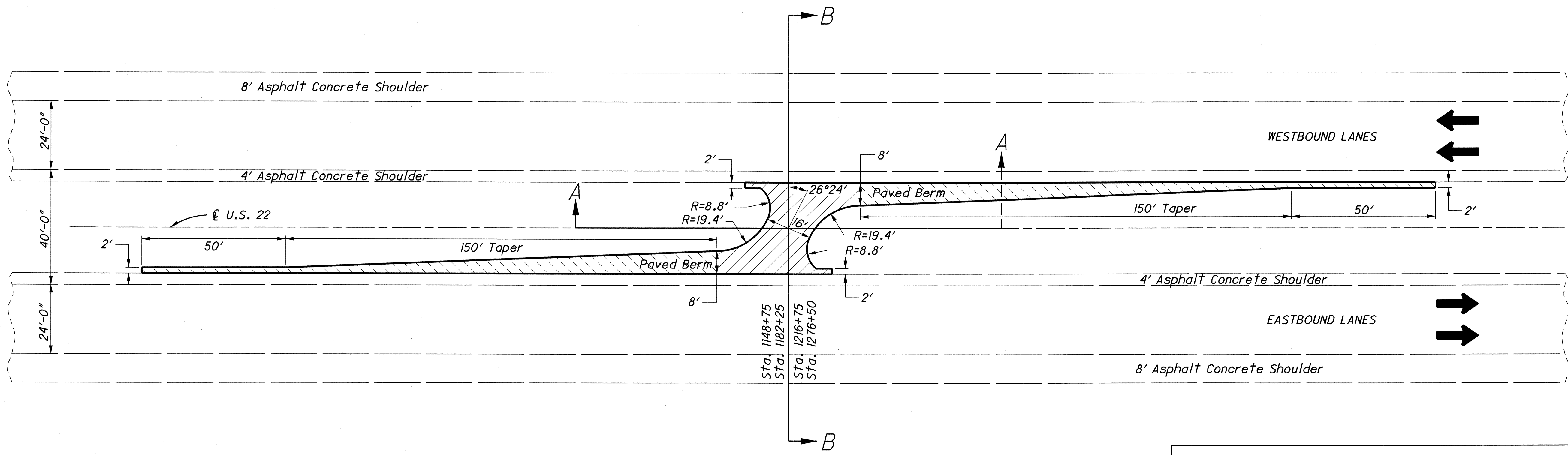
PAVEMENT TRANSITION AT RAMPS 'J' AND 'K'



PAVEMENT TRANSITION AT OVERHEAD BRIDGES

 Pavement Planing
For Legend See Sheet No. 3

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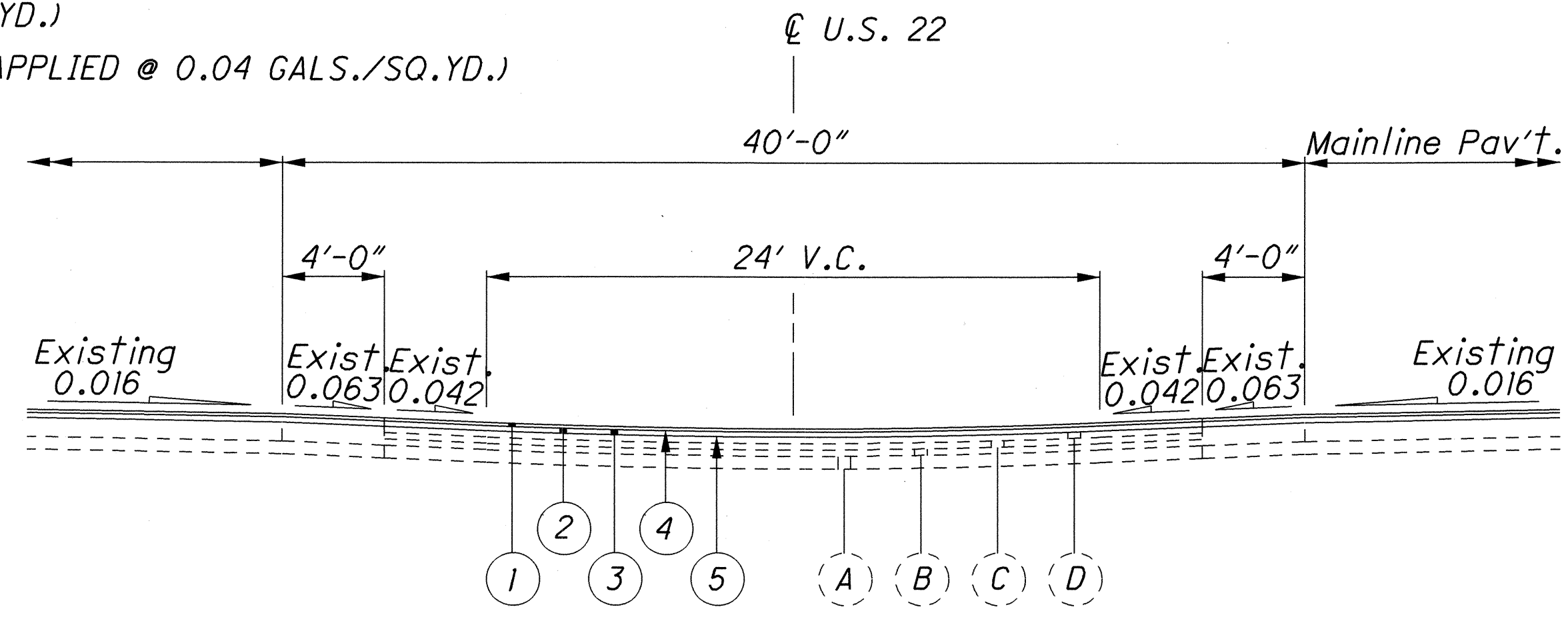
PLAN
Scale 1:200

PROPOSED LEGEND

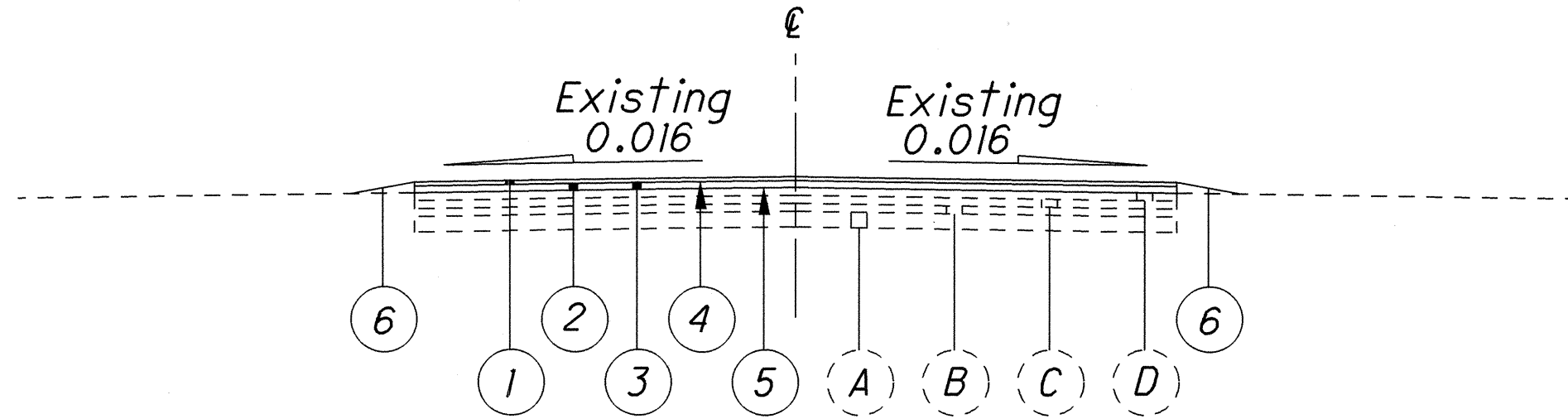
- ① — ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN
- ② — ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448)
- ③ — ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1 3/4" NOMINAL DEPTH)
- ④ — ITEM 407 - TACK COAT (APPLIED @ 0.075 GALS./SQ.YD.)
- ⑤ — ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED @ 0.04 GALS./SQ.YD.)
- ⑥ — ITEM 209 - LINEAR GRADING, AS PER PLAN

EXISTING LEGEND

- (A) — EXISTING SUBBASE
- (B) — EXISTING AGGREGATE BASE
- (C) — EXISTING BITUMINOUS AGGREGATE BASE
- (D) — EXISTING ASPHALT CONCRETE



SECTION B-B
Scale 1:50



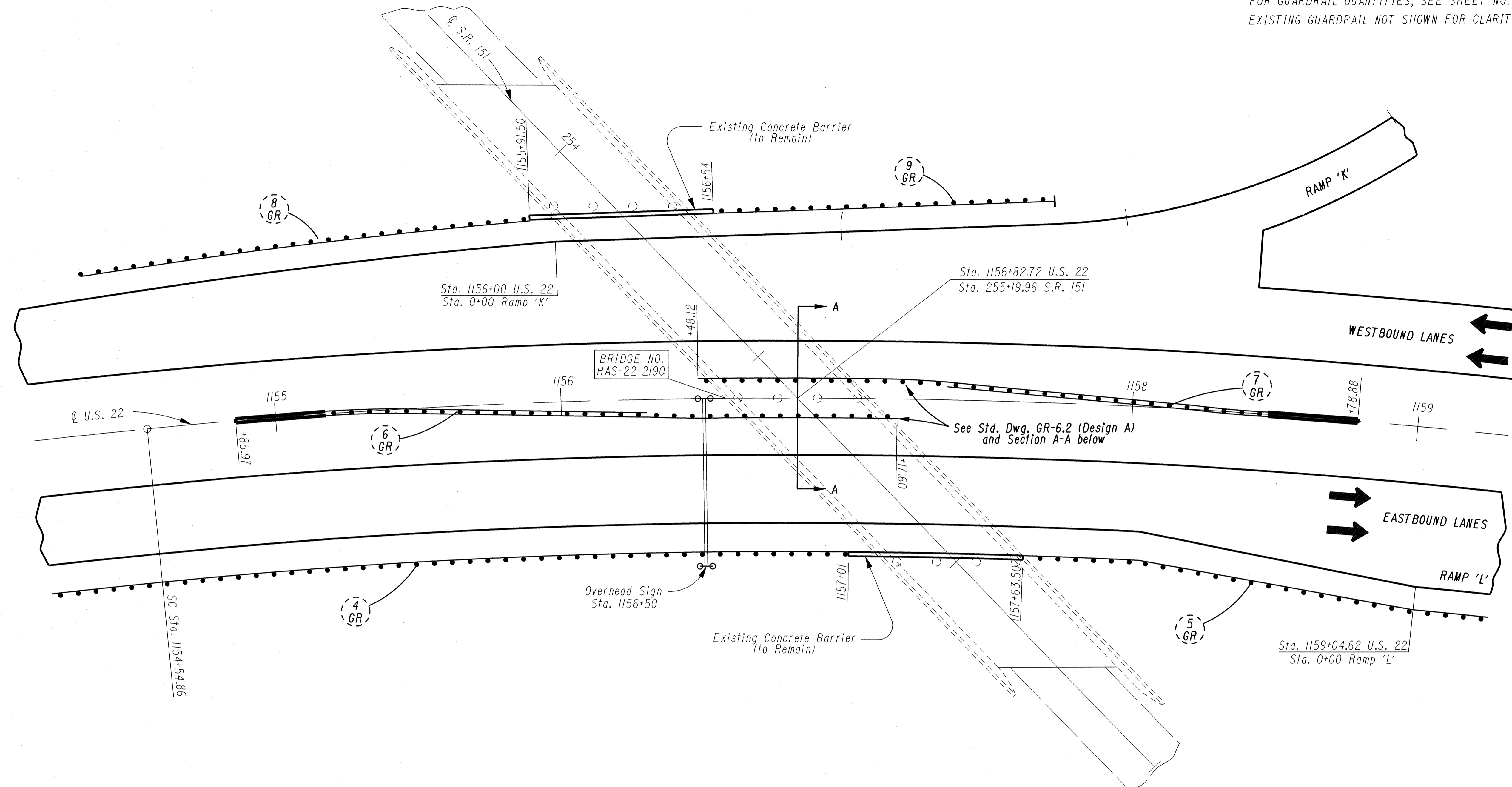
SECTION A-A
Scale 1:50

	CADD Generated Area	= 889 Sq. Ft.
	CADD Generated Area (850 Sq. Ft. x 2 Tapers)	= 1700 Sq. Ft.
		Total Median Cross-over Area = 2589 Sq. Ft.
		2589 Sq. Ft. x 4 locations = 10,356 Sq. Ft.

QUANTITIES	
Item 254 - Pavement Planing, Asphalt Concrete, As Per Plan (1 3/4" Nominal Depth)	10,356 Sq. Ft. ÷ 9 = 1151 Sq. Yd.
Item 442 - Asphalt Concrete Surface Course, 12.5mm, Type B (446), As Per Plan	10,356 Sq. Ft. x 1/2" ÷ 12 ÷ 27 = 47.94 Cu. Yd.
Item 442 - Asphalt Concrete Intermediate Course, 19mm, Type B (448)	10,356 Sq. Ft. x 1 3/4" ÷ 12 ÷ 27 = 55.94 Cu. Yd.
Item 407 - Tack Coat for Intermediate Course	10,356 Sq. Ft. ÷ 9 x 0.04 = 46.03 Gallon
Item 407 - Tack Coat	10,356 Sq. Ft. ÷ 9 x 0.075 = 86.30 Gallon
Linear grading quantities are calculated with quantities on sheet no. 16.	
Quantities Carried to General Summary	

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FOR GUARDRAIL QUANTITIES, SEE SHEET NO. 17, 18.
EXISTING GUARDRAIL NOT SHOWN FOR CLARITY.



ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

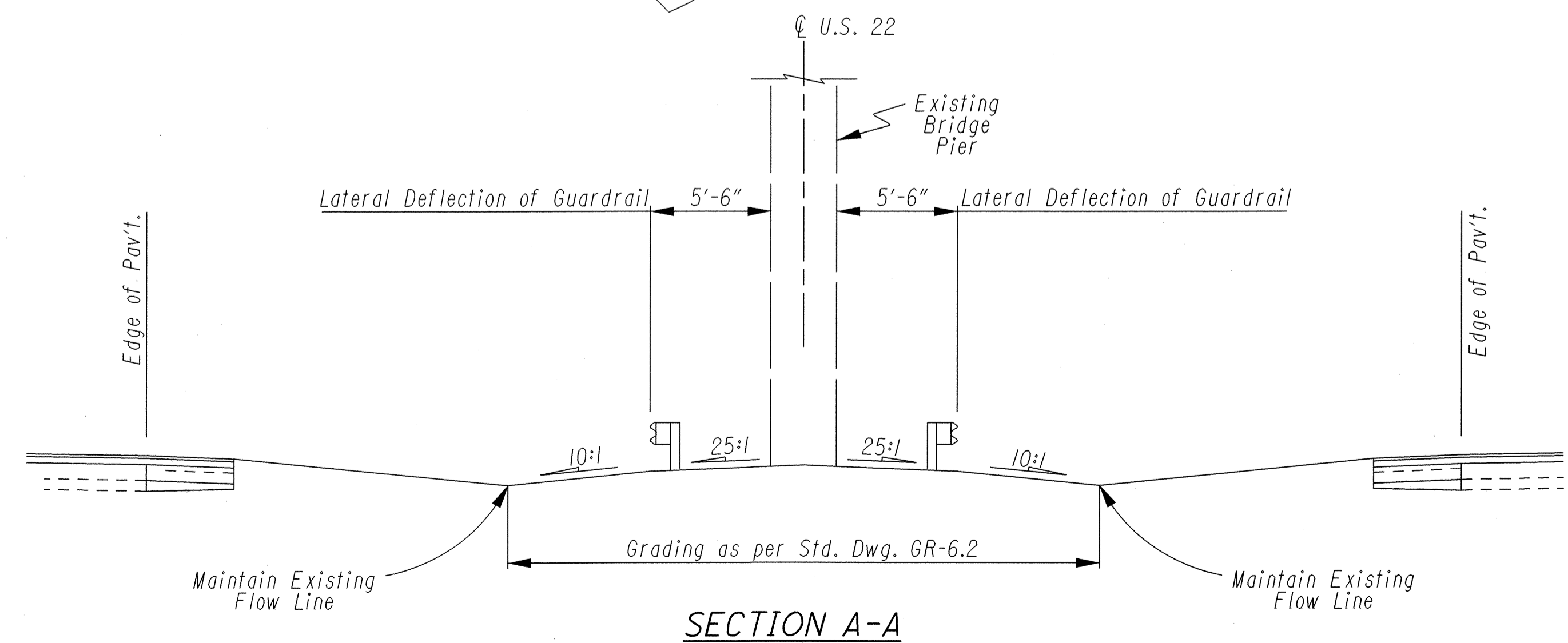
Bridge No HAS-22-2190 (Pier protection barrier):

E.B. Sta. 1157+01 to Sta. 1157+63.50 = 62.5' (32" barrier) (perimeter: 3"+10"+19"+9"+32" = 73")
W.B. Sta. 1155+91.50 to Sta. 1156+54 = 62.5' (32" barrier) (perimeter: 3"+10"+19"+9"+32" = 73")

Total Barrier Length = 125'

Barrier Area = 125' x 73" ÷ 12 ÷ 9 = 84.49 Sq. Yd.

TOTALS = 85 Sq. Yd. (Carried to General Summary)



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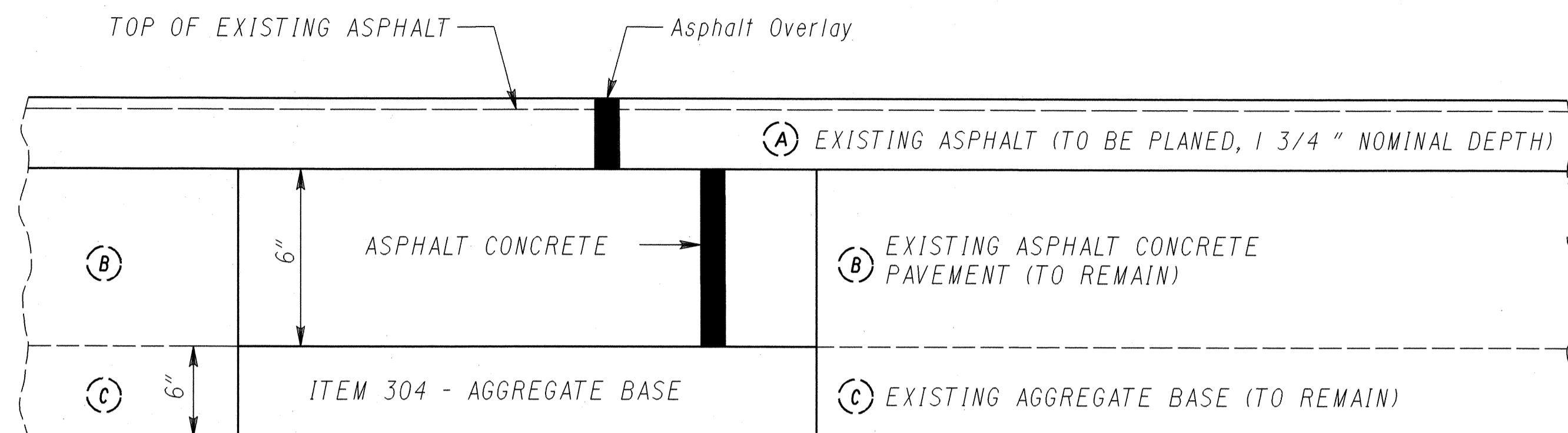


CALCULATED RDA
CHECKED TES

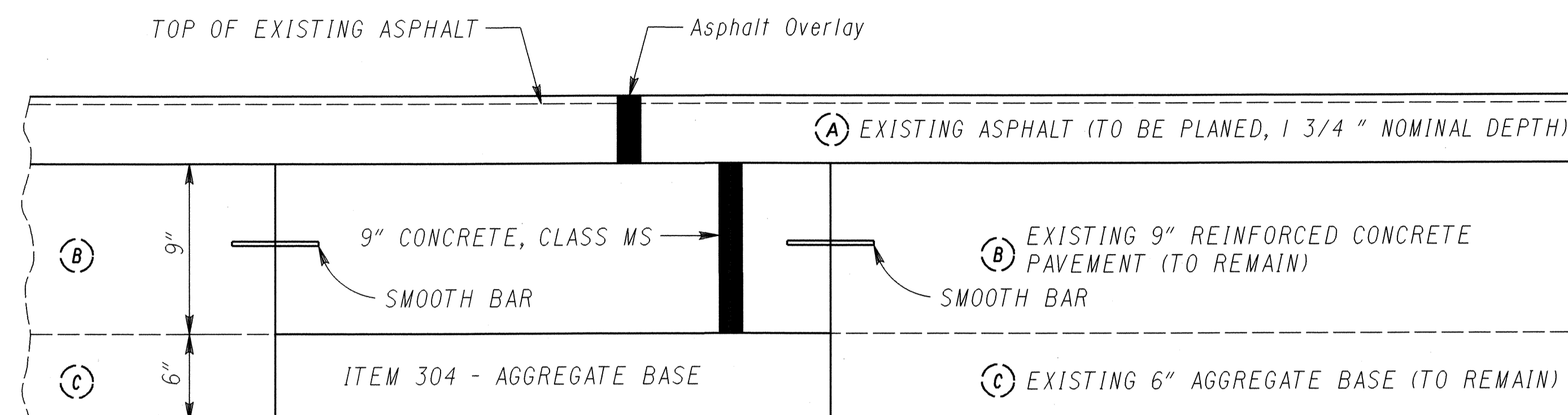
GUARDRAIL DETAILS
BRIDGE NO. HAS-22-2190

HAS-22-21.47

32
36



SHOULDER REPAIR TYPICAL



MAINLINE PAVEMENT REPAIR TYPICAL

FOR DETAILS NOT SHOWN SEE STANDARD CONSTRUCTION DRAWING BP-2.5
FOR TRANSVERSE JOINT REPAIR DETAILS AND BP-2.1 FOR LONGITUDINAL JOINT DETAILS

ITEM 253 - PAVEMENT REPAIR

This item shall be used for shoulder repair and shall meet the requirements of Item 253, Pavement Repair, and the above typical section.

The estimated quantities are to be considered approximate. A final field review will be performed by ODOT prior to construction and final locations will be given to the Contractor prior to construction.

This work consists of removing the existing asphalt concrete and the aggregate base courses; shaping and compacting the exposed material; placing Item 304 Aggregate Base; followed by Item 302 Asphalt Concrete Base.

The following estimated quantities have been provided for information only.

Item 302 - Asphalt Concrete Base	1293 Cu. Yd.
Item 304 - Aggregate Base	1293 Cu. Yd.

The following estimated quantities have been carried to the General Summary to be used as directed by the Engineer. Final payment for these items shall be for the accepted quantity completed in place.

Item 253 - Pavement Repair	7758 Sq. Yd.
----------------------------	--------------

ITEM 605 - AGGREGATE DRAINS

This item shall be used to construct aggregate drains and shall meet the requirements of Item 605, Aggregate Drains.

The following estimated quantity has been carried to the General Summary to be used as directed by the Engineer. Final payment for these items shall be for the accepted quantity completed in place.

Item 605 - Aggregate Drains	200 Ft.
-----------------------------	---------

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN

The estimated quantities are to be considered approximate. A final field review will be performed by ODOT prior to construction and final locations will be given to the Contractor prior to construction.

This work consists of removing the existing asphalt concrete, reinforced concrete, and the aggregate base courses; shaping and compacting the exposed material; placing Item 304 Aggregate Base; then installing dowel rods followed by concrete pavement, Class MS.

All other provisions of Standard Construction Drawings BP-2.1 and BP-2.5 apply.

The following estimated quantities have been provided for information only.

9" Concrete, Class MS	25 Cu. Yd.
Item 304 - Aggregate Base	50 Cu. Yd.
Item 509 - Epoxy Coated Reinforcing	1636 Pounds
Item 510 - Dowel Holes with Nonshrink, Nonmetallic Grout	264 Each

The following estimated quantities have been carried to the General Summary to be used as directed by the Engineer. Final payment for these items shall be for the accepted quantity completed in place.

Item 255 - Full Depth Pavement Removal and Rigid Replacement, Class MS, As Per Plan	288 Sq. Yd.
Item 255 - Full Depth Pavement Sawing	576 Ft.

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LOCATION	STATION		SIDE 'Direction of Travel'	642					621										
				EDGE LINE, TYPE 1 (YELLOW)	EDGE LINE, TYPE 1 (WHITE)	LANE LINE, TYPE 1	CENTER LINE, TYPE 1 (DOUBLE SOLID YELLOW)	CHANNELIZING LINE, TYPE 1	STOP LINE, TYPE 1	RPM									
										2 - WAY, WHITE / RED	2 - WAY, YELLOW / RED	1 - WAY, WHITE							2 - WAY, YELLOW / YELLOW
FROM	TO	FT.	FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH								
MAINLINE EASTBOUND																			
	1135+00	1140+26	LT.				526											8	
	1140+00	1168+68.19 Bk.	CTR.			2868.19						37							
	1168+75.64 Ah.	1280+62.94 Bk.	CTR.			11,187.3						141							
	1280+72.73 Ah.	1298+78.92 Bk.	CTR.			1806.19						24							
	1298+80.75 Ah.	1306+00	CTR.			719.25						10							
Right Turn Lane	1304+50	1306+00	RT.					150											
	1306+62.40	1329+83.81 Bk.	CTR.			2321.41						30							
	1329+98.24 Ah.	1333+20.65	CTR.			322.41						5							
Third Lane	1306+62.40	1321+00	RT.			1437.60						19							
	1333+62.94	1334+03.75	CTR.			40.81						1							
	1140+26	1168+68.19 Bk.	LT.	2842.19															
	1168+75.64 Ah.	1280+62.94 Bk.	LT.	11,187.3															
	1280+72.73 Ah.	1298+78.92 Bk.	LT.	1806.19															
	1298+80.75 Ah.	1306+00	LT.	719.25															
	1306+97.23	1329+83.81 Bk.	LT.	2286.58															
	1329+98.24 Ah.	1333+20.65	LT.	322.41															
	1333+62.94	1334+03.75	LT.	40.81															
	1135+00	1168+68.19 Bk.	RT.		3368.19														
	1168+75.64 Ah.	1280+62.94 Bk.	RT.		11,187.3														
	1280+72.73 Ah.	1298+78.92 Bk.	RT.		1806.19														
	1298+80.75 Ah.	1305+37.44	RT.		656.69														
T.R. 180 Intersection	1305+37.44	1306+62.40	RT.		196.99 *				18										
	1306+62.40	1329+83.81 Bk.	RT.		2321.41														
	1329+98.24 Ah.	1332+65.68	RT.		267.44														
T.R. 65 Intersection	1332+65.68	1333+82.37	RT.		220.61 *				18										
	1333+82.37	1334+03.75	RT.		21.38														
MAINLINE WESTBOUND																			
	1146+10	1168+68.19 Bk.	CTR.			2258.19						29							
	1168+75.64 Ah.	1280+62.94 Bk.	CTR.			11,187.3						141							
	1280+72.73 Ah.	1298+78.92 Bk.	CTR.			1806.19						24							
	1298+80.75 Ah.	1306+12.36	CTR.			731.61						10							
Left Turn Lane	1306+97.23	1308+02.23	RT.					105											
	1306+97.23	1329+83.81 Bk.	CTR.			2286.58						30							
	1329+98.24 Ah.	1334+03.75	CTR.			405.51						6							
	1137+76	1140+26	LT.				250											4	
	1140+26	1168+68.19 Bk.	LT.	2842.19															
	1168+75.64 Ah.	1280+62.94 Bk.	LT.	11,187.3															
	1280+72.73 Ah.	1298+78.92 Bk.	LT.	1806.19															
	1298+80.75 Ah.	1306+00	LT.	719.25															
	1306+97.23	1329+83.81 Bk.	LT.	2286.58															
	1329+98.24 Ah.	1333+20.65	LT.	322.41															
	1333+62.94	1334+03.75	LT.	40.81															
	1135+00	1168+68.19 Bk.	RT.		3368.19							8 **		10 **				** 4-lane to 2-lane Transition per Std. Dwg. TC-65.11	
	1168+75.64 Ah.	1280+62.94 Bk.	RT.		11,187.3														
	1280+72.73 Ah.	1298+78.92 Bk.	RT.		1806.19														
	1298+80.75 Ah.	1306+12.36	RT.		731.61														
T.R. 180 Intersection	1306+12.36	1307+40.05	RT.		200.72 *				20										
	1307+40.05	1329+83.81 Bk.	RT.		2243.76														
	1329+98.24 Ah.	1334+03.75	RT.		405.51														
SUB-TOTALS CARRIED TO SHEET NO. 36				38,409.46	39,989.48	39,378.54	776	255	56			515	10	12					

CALCULATED
RDA
CHECKED
TES

TRAFFIC CONTROL

HAS-22-21.47

34
36

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LOCATION	STATION		SIDE 'Direction of Travel'	642							621										
				* CADD Generated							RPM										
				EDGE LINE, TYPE 1 (YELLOW)	EDGE LINE, TYPE 1 (WHITE)	LANE LINE, TYPE 1	CENTER LINE, TYPE 1 (DOUBLE SOLID YELLOW)	CHANNELIZING LINE, TYPE 1	STOP LINE, TYPE 1	CURB MARKING, TYPE 1	ISLAND MARKING, TYPE 1	2 - WAY, WHITE/RED	2 - WAY, YELLOW/RED								
FT.	FT.	FT.	FT.	FT.	FT.	FT.	SQ. FT.	EACH	EACH	EACH											
S.R. 151 INTERCHANGE																					
Ramp 'J'	13+10.71	12+70.70	RT.		58.1 *																
Ramp 'J'	12+70.70 'K'	6+82.18 'K'	RT.		588.52																
Ramp 'J'	0+00	6+61.03	RT.		661.03																
Ramp 'J'	13+00 'K'		CTR.						30												
Ramp 'J'	12+81.50 'K'	0+62	LT.							657.9											
Ramp 'J'	13+00 'K'	6+82.18 'K'	LT.	617.82								9									
Ramp 'J'	0+00	6+61.03	LT.	661.03								9									
Decel. Lane Ramp 'J'	6+61.03	8+63.06	LT.					454.65 *				12									
Decel. Lane Ramp 'J'	8+63.06	9+65.71	LT.			102.65															
Accel. Lane Ramp 'K'	0+68.27	1+36.48	LT.			68.21															
Accel. Lane Ramp 'K'	1+36.48	2+43.77	LT.					221.34 *				4									
Ramp 'K'	2+43.77	12+60.71	RT.		1016.94																
Ramp 'K'	12+60.71	13+10.71	RT.		73.8 *																
Ramp 'K'	2+43.77	13+00	LT.	1056.23								14									
Ramp 'K'	6+23.60	12+81.50	LT.							657.9	1315.8										
Decel. Lane Ramp 'L'	1+30.71	2+58.88	LT.			131.41 *															
Decel. Lane Ramp 'L'	2+58.88	3+33.08	LT.					154.9 *				6									
Ramp 'L'	3+33.08	7+50	LT.	416.92								6									
Ramp 'L'	3+33.08	6+65.56	RT.		332.48																
Ramp 'L'	6+65.56	7+56.66	RT.		106.8 *																
Ramp 'L'	7+46.66		CTR.						30												
Ramp 'M'	0+12.52	5+66.07	LT.	553.55								8									
Ramp 'M'	0+11.67	0+92.05	RT.		100.3 *																
Ramp 'M'	0+92.05	5+66.07	RT.		474.02																
Accel. Lane Ramp 'M'	5+66.07	6+26.60	LT.					126.25 *				3									
Accel. Lane Ramp 'M'	6+26.60	7+89.35	LT.			165.48 *															
SUB-TOTALS CARRIED TO SHEET NO. 36				3305.55	3411.99	467.75		957.14	60	1315.8	1315.8	25	46								

CALCULATED	RDA	CHECKED	TES
TRAFFIC CONTROL			
HAS-22-21.47			
35 36			

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LOCATION	STATION		SIDE 'Direction of Travel'	642								621									
				* CADD Generated								RPM									
				EDGE LINE, TYPE 1 (YELLOW)	EDGE LINE, TYPE 1 (WHITE)	LANE LINE, TYPE 1	CENTER LINE, TYPE 1 (DOUBLE SOLID YELLOW)	CHANNELIZING LINE, TYPE 1	STOP LINE, TYPE 1	CURB MARKING, TYPE 1	ISLAND MARKING, TYPE 1	2 - WAY, WHITE / RED	2 - WAY, YELLOW / RED	1 - WAY, WHITE	2 - WAY, YELLOW / YELLOW						
FROM	TO		FT.	FT.	FT.	FT.	FT.	FT.	FT.	SQ. FT.	EACH	EACH	EACH	EACH							
C.R. 4 INTERCHANGE																					
Accel. Lane Ramp 'N'	2+47.80	4+94.26	LT.			247.80 *															
Accel. Lane Ramp 'N'	4+94.26	6+18.17	LT.					249.25 *				4									
Ramp 'N'	6+18.17	16+98.30	RT.		1080.13																
Ramp 'N'	16+98.30	17+45.74	RT.		70.6 *																
Ramp 'N'	6+18.17	16+98.30	LT.	1080.13									15								
Ramp 'N'	16+98.30	17+45.74	LT.	61.5 *																	
Decel. Lane Ramp 'Q'																					
Decel. Lane Ramp 'Q'	2+46.38	3+70.13	LT.					247.76 *				7									
Ramp 'Q'	3+70.13	17+00	LT.	1329.87									18								
Ramp 'Q'	17+00	17+50	LT.	56.32 *																	
Ramp 'Q'	3+70.13	17+24	RT.		1353.87																
Ramp 'Q'	17+24	17+50	RT.		46.08 *																
Ramp 'Q'	17+39.09		CTR.						35												
Ramp 'S'																					
Ramp 'S'	0+22		CTR.						38												
Ramp 'S'	0+12	0+52.02	LT.	55.3 *																	
Ramp 'S'	0+52.02	7+35.15	LT.	683.13									10								
Ramp 'S'	0+12	0+52.02	RT.		57.5 *																
Ramp 'S'	0+52.02	7+35.15	RT.		683.13																
Decel. Lane Ramp 'S'	7+35.15	8+56.90	LT.					247.74 *				7									
Ramp 'T'																					
Ramp 'T'	0+12.65	0+83.90	LT.	91.5 *																	
Ramp 'T'	0+83.90	7+80.23	LT.	696.33									10								
Ramp 'T'	0+12.65	0+83.90	RT.		91.8 *																
Ramp 'T'	0+83.90	7+80.23	RT.		696.33																
Accel. Lane Ramp 'T'	7+80.23	9+03.94	LT.					249.19 *				4									
Accel. Lane Ramp 'T'	9+03.94	11+40.63	LT.			238.02 *															
SUB-TOTALS FROM SHEET NO. 34				38.409.46	39.989.48	39.378.54	776	255	56			515		10	12						
SUB-TOTALS FROM SHEET NO. 35				3305.55	3411.99	467.75		957.14	60	1315.8	1315.8	25	46								
SUB-TOTALS FROM THIS SHEET				4054.08	4079.44	485.82		993.94	73			22	53								
TOTALS CARRIED TO GENERAL SUMMARY				17.66 Mile		7.64 Mile	0.15 Mile	2206.08	189	1315.8	1315.8	683									

CALCULATED
RDA
CHECKED
TES

TRAFFIC CONTROL

HAS-22-21.47

36
36

SPECIAL PROVISIONS

Supplemental Specification 832

CO-RT-SEC: HAS-22-21.47
PID: 77348

DATE: 5-20-08

SUPPLEMENTAL SPECIFICATION 832 UPDATE FOR COVERAGE UNDER OHIO EPA PERMIT NO. OHC000003

ALL REFERENCES TO THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION EFFLUENT GUIDELINES PERMIT NO. OHC000002 IN SUPPLEMENTAL SPECIFICATION 832 (SS832) AND APPENDIX E WILL BE REPLACED WITH THE OEPA GENERAL PERMIT NO. OHC000003, AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM ("THE OHC000003 PERMIT"). A COPY OF THE OHC000003 PERMIT IS ATTACHED.

THE CONTRACTOR NEEDS TO FULLY UNDERSTAND ALL REQUIREMENTS OF THE OHC000003 PERMIT BEFORE BEGINNING ANY WORK. FOR ANY DISCREPENCIES BETWEEN SS832 AND THIS SPECIAL PROVISION, RESOLUTION SHOULD BE BASED ON THE OHC000003 PERMIT.

ALL ITEMS COVERED IN SS832 WILL APPLY WITH THE EXCEPTION OF THE ITEMS NOTED BELOW:

A. SECTION 832.06 - EARTH DISTURBING ACTIVITY (EDA) REQUIREMENTS

1. DELETE THE SECOND SENTENCE IN THE FIRST PARAGRAPH, "COMPLY WITH C&MS 105.16 WHEN EDA (INCLUDING BORROW AND WASTE AREAS) ARE INVOLVED, UNLESS THE AREAS IN QUESTION HAVE BEEN CLEARED THROUGH PRIOR ENVIRONMENTAL STUDIES".

B. SECTION 832.08(I) - LOCATE AND FURNISH BMP (SEDIMENT BASINS AND DAMS

1. CONSTRUCT BASINS ACCORDING TO THE CONDITIONS AND VOLUME REQUIREMENTS INDICATED IN THE OHC000003 PERMIT.

C. SECTION 832.13 - SWPPP ACCEPTANCE

1. ADD THE FOLLOWING TO THE EXISTING LIST OF ITEMS THAT MAY BE CRITICALLY ASSESSED BY THE DEPARTMENT:
 - a. THE VOLUME, GEOMETRY AND LOCATION OF SEDIMENT BASINS.
 - b. IF REQUIRED BY THE OHC000003 PERMIT, CALCULATIONS VERIFYING THE DRAIN TIME OF SEDIMENT PONDS MEETS THE REQUIREMENTS OF THE OHC000003 PERMIT.



OHIO EPA

APR 21 2008

PERMITTING DIVISION'S JOURNAL

Page 1 of 40
Ohio EPA Permit No.: OHC000003

Effective Date: April 21, 2008
Expiration Date: April 20, 2013

Page 2 of 40
Ohio EPA Permit No.: OHC000003

TABLE OF CONTENTS

OHIO ENVIRONMENTAL PROTECTION AGENCY

AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the State identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the State associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-06.

Laura H. Powell
Assistant Director

I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.

By: Date: 4-21-08

- PART I. COVERAGE UNDER THIS PERMIT
 - A. Permit Area
 - B. Eligibility
 - C. Requiring an individual permit or an alternative general permit
 - D. Permit requirements when portions of a site are sold
 - E. Authorization
- PART II. NOTICE OF INTENT REQUIREMENTS
 - A. Deadlines for notification
 - B. Failure to notify
 - C. Where to submit an NOI
 - D. Additional notification
 - E. Renotification
- PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)
 - A. Storm Water Pollution Prevention Plans
 - B. Timing
 - C. SWP3 Signature and Review
 - D. Amendments
 - E. Duty to inform contractors and subcontractors
 - F. Total Maximum Daily Load (TMDL) allocations
 - G. SWP3 Requirements
- PART IV. NOTICE OF TERMINATION REQUIREMENTS
 - A. Failure to notify
 - B. When to submit an NOT
 - C. How to submit an NOT
- PART V. STANDARD PERMIT CONDITIONS
 - A. Duty to comply
 - B. Continuation of the expired general permit
 - C. Need to halt or reduce activity not a defense
 - D. Duty to mitigate
 - E. Duty to provide information
 - F. Other information
 - G. Signatory requirements
 - H. Certification
 - I. Penalties for falsification of monitoring systems
 - J. Oil and hazardous substance liability
 - K. Property rights
 - L. Severability
 - M. Transfers
 - N. Environmental laws
 - O. Proper operation and maintenance
 - P. Inspection and entry
- PART VI. REOPENER CLAUSE
- PART VII. DEFINITIONS

PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit covers the entire State of Ohio.

B. Eligibility.

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the State or a storm drain leading to surface waters of the State.

For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres of land. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

- a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;
- b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;
- c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and
- d. The support activity is on or contiguous with the property defined in the NOI (off-site borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site);

Part I.B

2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:
 - a. Storm water discharges that originate from the site after construction activities have been completed, including any temporary support activity, and the site has achieved final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;
 - b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and
 - c. Storm water discharges authorized by an individual NPDES permit or an alternative NPDES general permit;
3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:
 - a. **Rainfall erosivity waiver.** For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with at least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period (see Attachment A); or

Part I.B.3

- b. **TMDL (Total Maximum Daily Load) waiver.** Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.
4. **Prohibition on non-storm water discharges.** All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from fire fighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

Part I.B

5. **Spills and unintended releases** (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of 40 CFR Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the State. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. **The director may require an alternative permit.** The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-04. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

Part I.C

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.
3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the conveyance of permit coverage for a portion of the development will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit coverage for individual lot(s) will be conveyed, the permittee shall inform, in writing, the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

E. Authorization

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form in accordance with the requirements of Part II of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, shall notify the applicant in writing that he/she has been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.

Part I.E

2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

Part II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for notification.

Initial coverage: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form and appropriate fee at least 21 days prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.

Individual lot transfer of coverage: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. The original permittee may submit an Individual Lot NOT at the time the Individual Lot NOI is submitted. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.

B. Failure to notify.

Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the State without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.

Part II

C. Where to submit an NOI.

Operators seeking coverage under this permit must submit a signed NOI form, provided by Ohio EPA, to the address found in the associated instructions.

D. Additional notification.

The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.

E. Renotification.

Upon renewal of this general permit, the permittee is required to notify the director of his intent to be covered by the general permit renewal. Permittees covered under the previous NPDES general permits for storm water discharges associated with construction activity (NPDES permit numbers OHR100000 and OHC000002) shall have continuing coverage under this permit. The permittees covered under OHR100000 or OHC000002 shall submit a letter within 90 days of receipt of written notification by Ohio EPA expressing their intent that coverage be continued. There is no fee associated with these letters of intent for continued coverage. Permit coverage will be terminated after the 90-day period if the letter is not received by Ohio EPA. Ohio EPA will provide instructions on the contents of the letter and where it is to be sent within the notification letter.

PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants in storm water discharges during construction and pollutants associated with post-construction activities to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

B. Timing

A SWP3 shall be completed prior to the timely submittal of an NOI and updated in accordance with Part III.D. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

Permittees continuing coverage from the previous generations of this permit (OHR100000 and OHC000002) that have initiated construction activity prior to the receipt of the first written notification from Ohio EPA to submit a letter of intent to continue coverage, as required in Part II.E, are not required to update their SWP3 as a result of this renewal (OHC000003). Permittees continuing coverage from the previous generations of this permit (OHR100000 and OHC000002) that have not initiated construction activity prior to the receipt of the first written notification from Ohio EPA to submit a letter of intent to continue coverage, as required in Part II.E, are required to update their SWP3 as a result of this renewal (OHC000003).

C. SWP3 Signature and Review.

1. Plan Signature and Retention On Site. The SWP3 shall include the certification in Part V.H., be signed in accordance with Part V.G., and be retained on site during working hours.

Part III.C

2. Plan Availability

- a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.
- b. By written request: The permittee must provide a copy of the SWP3 within 10 days upon written request by any of the following:
 - i. The director or the director's authorized representative;
 - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
 - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
- c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.

3. Plan Revision. The director or authorized representative, may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director (or as otherwise provided in the notification) or authorized representative, the permittee shall make the required changes to the SWP3 and, if requested, shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

D. Amendments

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the State or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

Part III

E. Duty to inform contractors and subcontractors

The permittee shall inform all contractors and subcontractors not otherwise defined as "operators" in Part VII of this general permit, who will be involved in the implementation of the SWP3, of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created and signatures of each individual contractor shall be obtained prior to their commencement of work on the construction site.

F. Total Maximum Daily Load (TMDL) allocations

If a TMDL is approved for any waterbody into which the permittee's site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3.

G. SWP3 Requirements

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. Site description. Each SWP3 shall provide:

- a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
- b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
- c. An estimate of the impervious area and percent imperviousness created by the construction activity;
- d. A calculation of the runoff coefficients for both the pre-construction and post construction site conditions;
- e. Existing data describing the soil and, if available, the quality of any discharge from the site;
- f. A description of prior land uses at the site;

Part III.G.1

- g. An implementation schedule which describes the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- h. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the State must be indicated;
- i. For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices.

This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones.

- j. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- k. A copy of the permit requirements (attaching a copy of this permit is acceptable);
- l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;
- m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and
- n. Site map showing:

Part III.G.1.n

- i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;
- ii. Soils types should be depicted for all areas of the site, including locations of unstable or highly erodible soils;
- iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;
- iv. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;
- v. Existing and planned locations of buildings, roads, parking facilities and utilities;
- vi. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development;
- vii. Sediment and storm water management basins noting their sediment settling volume and contributing drainage area;
- viii. Permanent storm water management practices to be used to control pollutants in storm water after construction operations have been completed.
- ix. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;
- x. The location of designated construction entrances where the vehicles will access the construction site;
- xi. The location of any in-stream activities including stream crossings;

Part III.G

2. **Controls.** The SWP3 must contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) must implement such controls. The SWP3 must clearly describe for each major construction activity identified in Part III.G.1.g: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

- a. **Non-Structural Preservation Methods.** The SWP3 must make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving riparian areas adjacent to surface waters of the State, preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time and designation of tree preservation areas or other protective clearing or grubbing practices. The recommended buffer that operators should leave undisturbed along a surface water of the State is 25 feet as measured from the ordinary high water mark of the surface water.
- b. **Erosion Control Practices.** The SWP3 must make use of erosion controls that are capable of providing cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 must provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.

Part III.G.2.b

- i. **Stabilization.** Disturbed areas must be stabilized as specified in the following tables below. Permanent and temporary stabilization are defined in Part VII.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the State and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the State and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 21 days
For all construction activities, any disturbed areas that will be dormant for more than 21 days but less than one year, and not within 50 feet of a surface water of the State	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.

- ii. **Permanent stabilization of conveyance channels.** Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the current edition of the Rainwater and Land Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

Part III.G.2

- c. **Runoff Control Practices.** The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.
- d. **Sediment Control Practices.** The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 must contain detail drawings for all structural practices.

- i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the up slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.
- ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:
- concentrated storm water runoff (e.g., storm sewer or ditch);
 - runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers;
 - runoff from drainage areas that exceed the design capacity of inlet protection; or
 - runoff from common drainage locations with 10 or more acres of disturbed land.

Part III.G.2.d.ii

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft³) per acre of drainage (67 yd³/acre) with a minimum 48-hour drain time for sediment basins serving a drainage area over 5 acres. The volume of the sediment storage zone shall be calculated by one of the following methods: Method 1: The volume of the sediment storage zone shall be 1000 ft³ per disturbed acre within the watershed of the basin. OR Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model. The accumulated sediment shall be removed from the sediment storage zone once it's full. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone must be less than or equal to five feet. The configuration between inlets and the outlet of the basin must provide at least two units of length for each one unit of width (> 2:1 length:width ratio), however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- iii. **Silt Fence and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. This permit does not preclude the use of other sediment barriers designed to control sheet flow runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in the table below.

Part III.G.2.d.iii

Maximum drainage area (in acres) to 100 linear feet of silt fence	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

Placing silt fence in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

- iv. Inlet Protection. Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems, unless the storm drain system drains to a sediment settling pond. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.
- v. Surface Waters of the State Protection. If construction activities disturb areas adjacent to surface waters of the State, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the State from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the State. For all construction activities immediately adjacent to surface waters of the State, it is recommended that a setback of at least 25-feet, as measured from the ordinary high water mark of the surface water, be maintained in its natural state as a permanent buffer. Where impacts within this setback area are unavoidable due to the nature of the construction activity (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the setback area are minimized.
- vi. Modifying Controls. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee must replace or modify the control for site conditions.

Part III.G.2

- e. Post-Construction Storm Water Management Requirements. So that the receiving stream's physical, chemical, and biological characteristics are protected and stream functions are maintained, post-construction storm water practices shall provide perpetual management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 must contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale must address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the State (e.g., wetland or stream) unless it's authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: localities may have more stringent post-construction requirements.

Detail drawings and maintenance plans must be provided for all post-construction BMPs. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). For sites located within a community with a regulated municipal separate storm sewer system (MS4), the permittee, land owner, or other entity with legal control of the property may be required to develop and implement a maintenance plan to comply with the requirements of the MS4. Maintenance plans must ensure that pollutants collected within structural post-construction practices, be disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as they were designed and constructed, the post construction operation and maintenance plan must be a stand-alone document, which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; and (5) a map showing all access and maintenance easements. Permittees are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed, may in themselves, need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Part III.G.2.e

Construction activities that do not include the installation of any impervious surface (e.g., soccer fields), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of additional impervious surface, are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects must be designed to minimize the number of stream crossings and the width of disturbance and achieve final stabilization of the disturbed area as defined in Part VII.H.1.

Large Construction Activities. For all large construction activities (involving the disturbance of five or more acres of land or will disturb less than five acres, but is a part of a larger common plan of development or sale which will disturb five or more acres of land), the post construction BMP(s) chosen must be able to detain storm water runoff for protection of the stream channels, stream erosion control, and improved water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural (designed) post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQv) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQv shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to the following equation:

$$WQv = C * P * A / 12$$

where:

WQv = water quality volume in acre-feet

C = runoff coefficient appropriate for storms less than 1 inch

(Either use the following formula: $C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$, where i = fraction of post-construction impervious surface or use Table 1)

P = 0.75 inch precipitation depth

A = area draining into the BMP in acres

Part III.G.2.e

Table 1
Runoff Coefficients Based on the Type of Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

Where the land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the storm water treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35$.

An additional volume equal to 20 percent of the WQv shall be incorporated into the BMP for sediment storage. Ohio EPA recommends that BMPs be designed according to the methodology included in the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Table 2 below shall be considered standard BMPs approved for general use. However communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP must not discharge more than the first half of the WQv or extended detention volume (EDv) in less than one-third of the drain time. The EDv is the volume of storm water runoff that must be detained by a structural post-construction BMP. The EDv is equal to 75 percent of the WQv for wet extended detention basins, but is equal to the WQv for all other BMPs listed in Table 2.

Part III.G.2.e

Table 2
Structural Post-Construction BMPs & Associated Drain (Drawdown) Times

Best Management Practice	Drain Time of WQv
Infiltration Basin [^]	24 - 48 hours
Enhanced Water Quality Swale	24 hours
Dry Extended Detention Basin [*]	48 hours
Wet Extended Detention Basin ^{**}	24 hours
Constructed Wetland (above permanent pool) [*]	24 hours
Sand & Other Media Filtration	40 hours
Bioretention Cell [^]	40 hours
Pocket Wetland [#]	24 hours
Vegetated Filter Strip	24 hours

^{*} Dry basins must include forebay and micropool each sized at 10% of the WQv
^{**} Provide both a permanent pool and an EDv above the permanent pool, each sized at 0.75
^{*} WQv
^{*} Extended detention shall be provided for the full WQv above the permanent water pool.
[^] The WQv shall completely infiltrate within 48 hours so there is no standing or residual water in the BMP.
[#] Pocket wetlands must have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool must be equal to the WQv.

The permittee may request approval from Ohio EPA to use alternative post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above. Construction activities shall be exempt from this condition if it can be demonstrated that the WQv is provided within an existing structural post-construction BMP that is part of a larger common plan of development or if structural post-construction BMPs are addressed in a regional or local storm water management plan. A municipally operated regional storm water BMP can be used as a post-construction BMP provided that the BMP can detain the WQv from its entire drainage area and release it over a 24 hour period.

Transportation Projects The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Part III.G.2.e

Offsite Mitigation of Post-Construction Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Table 2 are not feasible and the following criteria is met: (1) a maintenance agreement or policy is established to ensure operations and treatment in perpetuity; (2) the offsite location discharges to the same HUC-14 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI applications.

Redevelopment Projects Sites that have been previously developed where no post-construction BMPs were installed shall either ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQv, or a combination of the two. A one-for-one credit towards the 20 percent net reduction of impervious area can be obtained through the use of pervious pavement and/or green roofs. Where projects are a combination of new development and redevelopment, the total WQv that must be treated shall be calculated by a weighted average based on acreage, with the new development at 100 percent WQv and redevelopment at 20 percent WQv.

Non-Structural Post-Construction BMPs The size of the structural post-construction can be reduced by incorporating non-structural post-construction BMPs into the design. Practices such as preserving open space will reduce the runoff coefficient and, thus, the WQv. Ohio EPA encourages the implementation of riparian and wetland setbacks. Practices which reduce storm water runoff include permeable pavements, green roofs, rain barrels, conservation development, smart growth, low-impact development, and other site design techniques contained in the Ohio Lake Commission's Balanced Growth Program (see <http://www.epa.state.oh.us/oleo/bg1/index.html>). In order to promote the implementation of such practices, the Director may consider the use of non-structural practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, i.e., sheet flow from perimeter areas such as the rear yards of residential lots, for low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Part III.G.2.e

Use of Alternative Post-Construction BMPs This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. However, the Director may require these practices to be tested using the protocol outlined in the Technology Acceptance Reciprocity Partnership's (TARP) Protocol for Stormwater Best Management Practice Demonstrations (see <http://www.dep.state.pa.us/dep/deputate/pollprev/techservices/tarp>).

The Director may require discharges from such structures to be monitored to ensure compliance with Part III.G.2.e of this permit. Permittees must request approval from Ohio EPA to use alternative post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above. To demonstrate this equivalency, the permittee must show that the alternative BMP has a minimum total suspended solids (TSS) removal efficiency of 80 percent. Also, the WQv discharge rate from the practice must be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the State. The discharges will have a negligible impact if the permittee can demonstrate that one of the following four conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The project is a redevelopment project within an ultra-urban setting (i.e., a downtown area or on a site where 100 percent of the project area is already impervious surface and the storm water discharge is directed into an existing storm sewer system); or
- iv. The storm water drainage system of the development discharges directly into a large river (fourth order or greater) or to a lake and where the development area is less than 5 percent of the watershed area upstream of the development site, unless a TMDL identified water quality problems in the receiving surface waters of the State.

Part III.G.2.e

The Director shall only consider the use of alternative BMPs on projects where the permittee can demonstrate that the implementation of the BMPs listed in Table 2 is infeasible due to physical site constraints that prevent the ability to provide functional BMP design. Alternative practices may include, but are not limited to, underground detention structures, vegetated swales and vegetated filter strips designed using water quality flow, natural depressions, rain barrels, permeable pavements green roofs, rain gardens, catch basin inserts, and hydrodynamics separators. The Director may also consider non-structural post-construction approaches where no local requirement for such practices exist.

Small Construction Activities. For all small land disturbance activities (which disturb one or more, but less than five acres of land and is not a part of a larger common plan of development or sale which will disturb five or more acres of land), a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed must be included in the SWP3. Structural measures should be placed on upland soils to the degree attainable. Such practices may include, but are not limited to: storm water detention structures (including wet basins); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). The SWP3 shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

- f. **Surface Water Protection.** If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state non-jurisdictional stream and wetland requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee must contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

Part III.G.2.f

U.S. Army Corps of Engineers (Section 404 regulation):
Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River,
Scioto River, Little Miami River, and Great Miami River Basins)
Buffalo, NY District (716) 879-4191 (Lake Erie Basin)
Pittsburgh, PA District (412) 395-7154 (Mahoning River Basin)
Louisville, KY District (502) 315-6733 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be
contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be
converted to diffuse flow before the runoff enters the wetlands. The flow
should be released such that no erosion occurs downslope. Level spreaders
may need to be placed in series, particularly on steep sloped sites, to ensure
non-erosive velocities. Other structural BMPs may be used between storm
water features and natural wetlands, in order to protect the natural hydrology,
hydroperiod, and wetland flora. If the applicant proposes to discharge to
natural wetlands, a hydrologic analysis shall be performed. The applicant
shall attempt to match the pre-development hydroperiods and hydrodynamics
that support the wetland. The applicant shall assess whether their
construction activity will adversely impact the hydrologic flora and fauna of the
wetland. Practices such as vegetative buffers, infiltration basins, conservation
of forest cover, and the preservation of intermittent streams, depressions, and
drainage corridors may be used to maintain wetland hydrology.

- g. **Other controls.** The SWP3 must also provide BMPs for pollutant sources
other than sediment. Non-sediment pollutant sources, which may be present
on a construction site, include paving operations, concrete washout, structure
painting, structure cleaning, demolition debris disposal, drilling and blasting
operations, material storage, slag, solid waste, hazardous waste,
contaminated soils, sanitary and septic wastes, vehicle fueling and
maintenance activities, and landscaping operations.
- i. **Non-Sediment Pollutant Controls.** No solid or liquid waste, including
building materials, shall be discharged in storm water runoff. The
permittee must implement all necessary BMPs to prevent the discharge
of non-sediment pollutants to the drainage system of the site or surface
waters of the State. Under no circumstance shall concrete trucks wash
out directly into a drainage channel, storm sewer or surface waters of the
State. No exposure of storm water to waste materials is recommended.
- ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust
generation shall be minimized.

Part III.G.2.g

- iii. **Compliance with other requirements.** The SWP3 shall be consistent
with applicable State and/or local waste disposal, sanitary sewer or septic
system regulations, including provisions prohibiting waste disposal by
open burning and shall provide for the proper disposal of contaminated
soils to the extent these are located within the permitted area.
- iv. **Trench and ground water control.** There shall be no turbid discharges
to surface waters of the State resulting from dewatering activities. If
trench or ground water contains sediment, it must pass through a
sediment settling pond or other equally effective sediment control device,
prior to being discharged from the construction site. Alternatively,
sediment may be removed by settling in place or by dewatering into a
sump pit, filter bag or comparable practice. Ground water dewatering
which does not contain sediment or other pollutants is not required to be
treated prior to discharge. However, care must be taken when
discharging ground water to ensure that it does not become pollutant-
laden by traversing over disturbed soils or other pollutant sources.
- v. **Contaminated Sediment.** Where construction activities are to occur on
sites with contamination from previous activities, operators must be aware
that concentrations of materials that meet other criteria (is not considered
a Hazardous Waste, meeting VAP standards, etc.) may still result in
storm water discharges in excess of Ohio Water Quality Standards. Such
discharges are not authorized by this permit. Appropriate BMPs include,
but are not limited to:
- The use of berms, trenches, and pits to collect contaminated runoff
and prevent discharges;
 - Pumping runoff into a sanitary sewer (with prior approval of the
sanitary sewer operator) or into a container for transport to an
appropriate treatment/disposal facility; and
 - Covering areas of contamination with tarps or other methods that
prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior
to seeking permit coverage.

- h. **Maintenance.** All temporary and permanent control practices shall be
maintained and repaired as needed to ensure continued performance of their
intended function. All sediment control practices must be maintained in a
functional condition until all up slope areas they control are permanently
stabilized. The SWP3 shall be designed to minimize maintenance
requirements. The applicant shall provide a description of maintenance
procedures needed to ensure the continued performance of control practices.

Part III.G.2

- i. **Inspections.** At a minimum, procedures in an SWP3 shall provide that all controls on the site are inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. The inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice, or the ground is frozen). A waiver of inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following conditions are met: the project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the SWP3. Once a definable area has been finally stabilized, you may mark this on your SWP3 and no further inspection requirements apply to that portion of the site. The permittee shall assign "qualified inspection personnel" to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.g of this permit or whether additional control measures are required.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report must include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- iv. weather information and a description of any discharges occurring at the time of the inspection;
- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Part III.G.2.i

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

- i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it must be repaired or maintained within three days of the inspection. Sediment settling ponds must be repaired or maintained within 10 days of the inspection.
- ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 must be amended and the new control practice must be installed within 10 days of the inspection.
- iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.g of this permit, the control practice must be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.

Part III.G

3. **Approved State or local plans.** All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee must certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.
4. **Exceptions.** If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

PART IV. NOTICE OF TERMINATION REQUIREMENTS

A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

B. When to submit an NOT

1. Permittees wishing to terminate coverage under this permit must submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is

Part IV.B

- submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance agreement in place to ensure all post-construction BMPs will be maintained in perpetuity.
2. All permittees must submit an NOT form within 45 days of completing all permitted land disturbance activities. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:
 - a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
 - b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;
 - c. For residential construction only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner. (Note: individual lots without housing which are sold by the developer must undergo final stabilization prior to termination of permit coverage.); or
 - d. An exception has been granted under Part III.G.4.

C. How to submit an NOT

Permittees must use Ohio EPA's approved NOT form. The form must be completed and mailed according to the instructions and signed in accordance with Part V.G of this permit.

PART V. STANDARD PERMIT CONDITIONS.

A. Duty to comply.

1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111. and is grounds for enforcement action.
2. Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

Part V

C. Need to halt or reduce activity not a defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine compliance with this permit. The permittee shall also furnish to the director upon request copies of records required to be kept by this permit.

F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:

- a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or

Part V.G.1.a

ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

- b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - c. The written authorization is submitted to the director.

Part V.G

3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

H. Certification.

Any person signing documents under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the State or adjoining shorelines.

J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

Part V

L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

PART VI. REOPENER CLAUSE

- A. If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.
- B. Permit modification or revocation will be conducted according to ORC Chapter 6111.

PART VII. DEFINITIONS

- A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.
- B. "Best management practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the State. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.
- C. "Commencement of construction" means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill or excavating activities or other construction activities.
- D. "Concentrated storm water runoff" means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.
- E. "Director" means the director of the Ohio Environmental Protection Agency.
- F. "Discharge" means the addition of any pollutant to the surface waters of the State from a point source.
- G. "Disturbance" means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- H. "Final stabilization" means that either:
1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of landscape mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or
 2. For individual lots in residential construction by either:
 - a. The homebuilder completing final stabilization as specified above or

Part VII.H.2

- b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
 3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the State and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.
- I. "Individual Lot NOI" means a Notice of Intent for an individual lot to be covered by this permit (see parts I and II of this permit).
- J. "Larger common plan of development or sale"- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- K. "MS4" means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:
 1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the State; and
 2. Designed or used for collecting or conveying solely storm water,
 3. Which is not a combined sewer and
 4. Which is not a part of a publicly owned treatment works.
- L. "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."

Part VII

- M. "NOI" means notice of intent to be covered by this permit.
- N. "NOT" means notice of termination.
- O. "Operator" means any party associated with a construction project that meets either of the following two criteria:
1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
 2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with an SWP3 for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).
- As set forth in Part II.A, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.
- P. "Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.
- Q. "Permanent stabilization" means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- R. "Percent imperviousness" means the impervious area created divided by the total area of the project site.
- S. "Point source" means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
- T. "Qualified inspection personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

Part VII

- U. "Rainwater and Land Development" is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- V. "Riparian area" means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- W. "Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.
- X. "Sediment settling pond" means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.
- Y. "State isolated wetland permit requirements" means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.
- Z. "Storm water" means storm water runoff, snow melt and surface runoff and drainage.
- AA. "Surface waters of the State" or "water bodies" means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.
- BB. "SWP3" means storm water pollution prevention plan.
- CC. "Temporary stabilization" means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.
- DD. "Water Quality Volume (WQ_v)" means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQ_v is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.