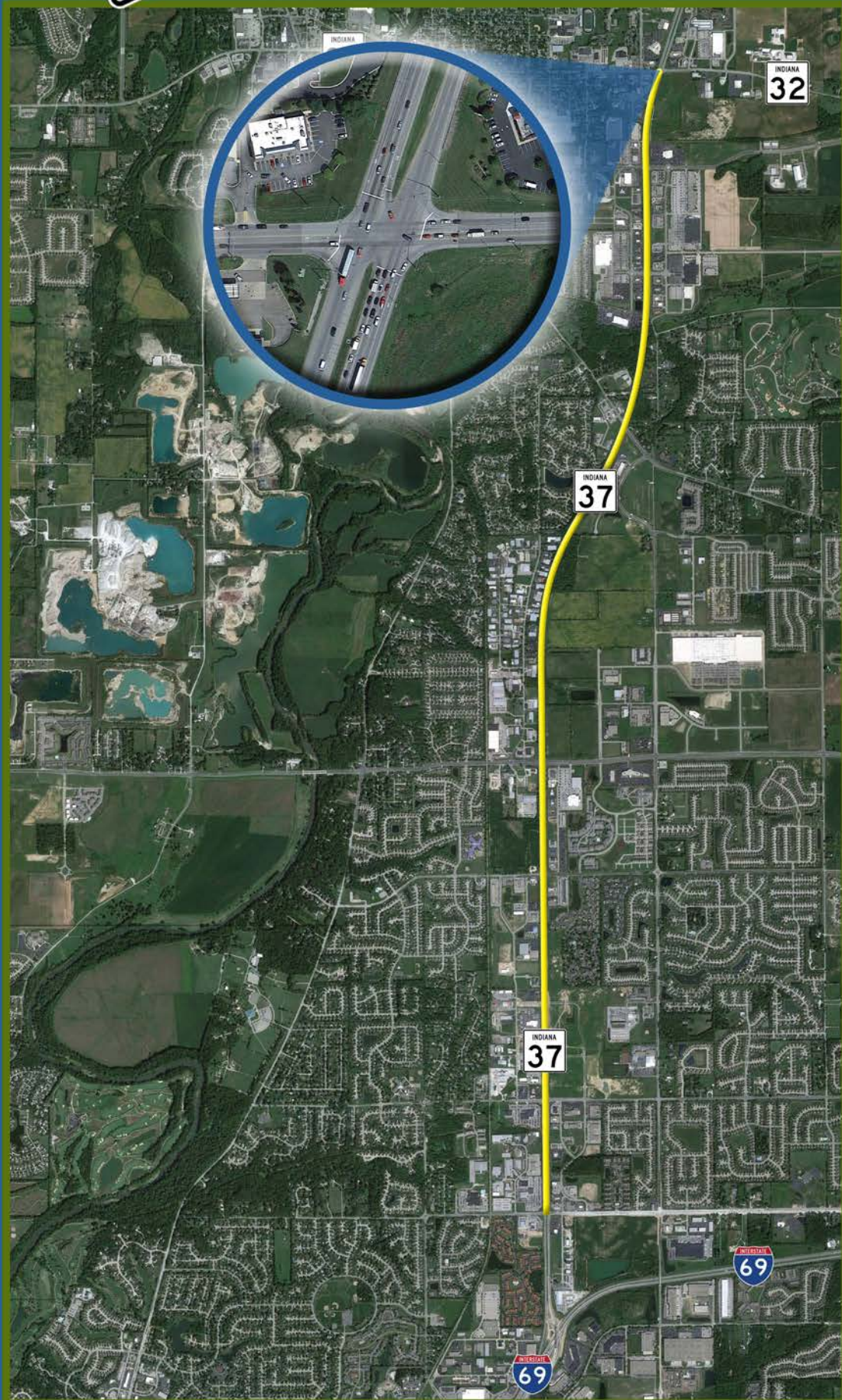




SR 37 MOBILITY STUDY



SR 37 AND SR 32/38

Presented to:



Presented by:





SR 37 Mobility Study SR 32 / SR 38 at SR 37

Description of Proposed Project

I. GENERAL

The Indiana Department of Transportation, the Indianapolis Metropolitan Planning Organization, Hamilton County, Town of Fishers, and City of Noblesville have identified the need to significantly improve the SR 37 corridor from 126th Street to SR 32 / SR 38. The Study area also extends along 146th Street from Allisonville Road to Cumberland Road. The Study was funded 80% by the Federal Highway Administration through the MPO with the remainder provided by Hamilton County.

II. PURPOSE

The purpose of the Study was to evaluate whether grade separation of the existing intersections would improve the traffic capacity, efficiency, and safety for the project corridors without the need to add additional travel lanes along this segment of the SR 37 corridor. This includes the basic concept of reconstructing each of the existing and anticipated signalized intersections through this segment of SR 37 to interchanges; thus eliminating the need for added travel lanes along the corridor. If this was shown to be an improvement, then the Study was to further identify a preferred design solution for future improvements along the SR 37 corridor and to identify potential environmental concerns that may be present, and to establish a reliable budget to construct these improvements.

The preferred design solution was defined to a level which will allow officials with the INDOT, MPO, Hamilton County, Town of Fishers, and the City of Noblesville to begin making necessary amendments to their requisite Planning Documents.

III. EXISTING FACILITY

The subject corridor is located in south central Hamilton County in Delaware and Noblesville Townships, and in the Town of Fishers and City of Noblesville. SR 37 runs south to north through Hamilton County; including the Study area. Additionally, SR 37 is intersected by I-69 immediately south of the Study area. SR 37 is designated as a state highway in central Indiana. Near the Study area SR 37 begins at I-69 and proceeds in a northerly direction before terminating in the City of Marion, Grant County. The items identified in bold below show the existing roadway system at SR 37 and SR 32 / SR 38:

Table 1 – Existing Roadway System				
Facility	Traffic Control	Travel Lanes	Functional Classification	Speed Limit (MPH)
SR 37	-	4	Expressway	55
SR 32/ SR 38	Signal	4	Primary Arterial	35 (West of SR 37) 45 (East of SR 37)

The following paragraphs give additional details for existing SR 32 / SR 38 within the Study area:

SR 32 / SR 38

SR 32 / SR 38 crosses SR 37 at an approximate 20 degree skew to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

SR 32 / SR 38 is classified as a Primary Arterial through the limits of this intersection and is not access controlled. On the west side of the existing intersection, outside the intersection limits, SR 32 / SR 38 is a four lane roadway with four 12-foot travel lanes, and outside curb and gutter on each side. The existing pavement on the west side of the intersection is full depth HMA and is in good condition. Within the intersection limits, each side of the roadway is bordered by curb and gutter.

On the east side of the existing intersection, outside the intersection limits, SR 32 / SR 38 is a two lane roadway with two 12-foot travel lanes in each direction bordered by a two foot shoulder on each side. The existing pavement within the intersection limits on the east side is full depth HMA and is in good condition. Near the intersection on the east side, the north side of the roadway is bordered by an eight foot shoulder, while the south side of the roadway is bordered by a six foot curb.

The intersection of SR 32 / SR 38 and SR 37 is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and one right turn lane on each approach. On the eastbound approach, SR 32 / SR 38 has one left turn lane, one through lane, and one right turn lane. On the westbound approach, SR 32 / SR 38 has one left turn lane and one through lane, and one shared right/through lane.

The intersection is bordered by businesses in the southwest, northwest, and northeast quadrants, and a vacant field in the southeast quadrant. Each business facility is set back according to the current Hamilton County Thoroughfare Plan for SR 37, with corners cuts preserved in each corner of the intersection. For a listing of each business adjacent to the intersection, see the aerial displays.

IV. EVALUATED BUILD ALTERNATIVES

The Study evaluated two primary build alternatives: upgrading the existing SR 37 corridor with either teardrop roundabout interchanges (Alternative 1) or tight diamond interchanges (Alternative 2). Both alternatives will significantly improve traffic operations at the Study intersections.

V. TRAFFIC OPERATION ANALYSIS

Table 2 shows the results of the Capacity Analysis for the proposed improvements at SR 37 and SR 32 / SR 38 for the study year of 2036. A teardrop roundabout interchange is proposed, with a 6-lane bridge crossing SR 37.

Table 2 – Alternative 1 (2036) Capacity Analysis												
Intersection	Traffic Control	Peak	West Leg		East Leg		South Leg		North Leg		Overall	
			LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
SR 37 NB Ramps and SR 32 / SR 38	Roundabout	AM	A	1.8	A	2.4	A	1.8	--	--	A	2.1
		PM	A	2.4	A	4.2	A	9.0	--	--	A	6.6
SR 37 SB Ramps and SR 32 / SR 38	Roundabout	AM	A	2.4	A	5.4	--	--	A	8.4	A	5.1
		PM	A	3.0	A	4.2	--	--	A	6.6	A	4.1

Please see the Traffic Operation Analysis (binder labeled Traffic Operation Analysis) to review the Study area results in their entirety.

VI. GEOTECHNICAL EVALUATION

The corridor is located in a glaciated area. With the exception of the area near Stony Creek, the alignment is within a typical Central Indiana profile that consists of softer and moderate-plasticity clays overlying hard and low-plasticity clays, and bedrock is over 100 feet deep. The harder clays are usually within 20 feet of the surface. In addition, frequent seams and layers of granular soils can be encountered. This profile typically includes seasonal perched groundwater conditions within a few feet of the surface. From a design and construction perspective, CBR values are commonly in the range of 3 to 4, and subsurface drainage is typically required for pavement and below-grade structures (e.g., cut walls). Because of the perched groundwater and the clayey soils, improvement of the subgrade for support of pavement and construction activities is usually required, particularly in areas of cut. Support of bridges on driven piling and/or spread foundations is anticipated to be viable. In addition, support of MSE walls in these conditions typically includes preparation of the subgrade for the leveling pad and structure fill.

Cut walls over about 12 feet in height are anticipated to required tie-backs in order to control deflections, and the length of tie-backs is typically in the range of 25 to 50 ft.

An exception to the profiles discussed above is anticipated to be encountered at the SR 32 / SR 38 interchange. On the east side of SR 37 at that interchange, we anticipate that marly soils may be exposed and/or may create special design and construction considerations, such as remove and replace or ground improvement. An additional construction cost of \$500,000 is

anticipated at the Pleasant Street intersection and \$1,000,000 at the SR 32 / SR 38 intersection to mitigate this condition.

A Geotechnical Evaluation will be required to evaluate the subsurface conditions and to provide the necessary information for a pavement design. This will include soil borings and a formal Geotechnical Report with recommendations that will be approved by INDOT.

VII. ENVIRONMENTAL INVESTIGATION

Improvements to this intersection will require the completion of an environmental document to qualify for federal funding. A Categorical Exclusion as falling within the guidelines of the National List of Categorical Exclusions will be required for this project. The Categorical Exclusion will need to be prepared in a manner consistent with the latest version of the "Indiana Categorical Exclusion Manual". The paragraphs below highlight the key environmental issues associated with the proposed project.

Wetland and Stream Impacts

The National Wetland Inventory Map shows no wetlands or streams within the project limits. A "Waters of the U.S." report (wetland determination/delineation) will be required to confirm and identify wetland boundaries and streams throughout the project limits.

Historic and Cultural Resources

Archeological: The proposed project will result in the acquisition of undisturbed right-of-way. As a result, an Archaeological Records Review and Phase Ia Archaeological Survey will be required to identify potentially significant cultural resources within the project limits.

Historical: The land use in close proximity and within the project area consists of recreational and residential properties. The *Hamilton County Interim Report* shows no historic properties within the probable Area of Potential Effects. However, properties may have become 50 years of age since the publication of the interim report.

At a minimum, this project will require the completion of the following Section 106 documents: Phase Ia Archaeological Survey, Historic Properties Report and a Section 106 Findings and Determinations (36 CFR 800.11).

Hazardous Materials

A search of the red flag indicators revealed underground storage tank sites and leaking underground storage tanks sites in the project vicinity. As a result, further investigation will be required to determine if the project would be impacted by hazardous materials.

Regulatory Permits

IDEM Rule 5 Permit: Since the project will disturb greater than one acre, Rule 5 administered through the Indiana Department of Environmental Management will apply to this project. The

designer shall coordinate all erosion and sediment control measures with the Hamilton County Soil and Water Conservation District.

VIII. DRAINAGE

The existing drainage on SR 32 / SR 38 is conveyed on the west leg of the intersection by sheet draining the pavement to outside curb and gutters. Curb and gutter turnouts are utilized to capture the storm water which flow toward SR 37 and drain into the ditches along SR 37. The drainage is conveyed on the east leg by sheet draining the pavement into a small swale which flows into the ditch along SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing south to a stream about 1290 feet south of the intersection.

The proposed drainage on SR 32 / SR 38 will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to the stream approximately 1290 feet south of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the southwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 800 feet south of the intersection out to the side ditch where it will maintain positive drainage to the outlet stream. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

IX. UTILITY COORDINATION

The following paragraphs give details pertaining to the presence of utilities at SR 32 / SR 38 and SR 37. This is followed by a discussion of potential impacts resulting from the project.

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: Overhead electric distribution runs along the north side of SR 32 / SR 38. Overhead electrical transmission runs along the east side of Cumberland Road. Electrical service to property owners is underground.

Gas: A gas marker is located on the south side of SR 32 / SR 38, west of SR 37, near the gas station. Without additional markers, this facility cannot be located.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street.

Water: The water main is on the south side of SR 32 / SR 38, west of SR 37, and on the north side of SR 32 / SR 38, east of SR 37. Laterals provide service to properties on both sides of the street.

Sanitary: There is no evidence of a sanitary sewer system.

Street Lighting: Decorative globe-style street lights are located on both sides of SR 32 / SR 38, west of SR 37. The spacing is approximately 150 feet. Cobra-style street lights are located on the south side of SR 32 / SR 38, east of SR 37. The spacing varies from 260 to 300 feet.

Impacts

With SR 32 / SR 38 going over SR 37, existing underground facilities along SR 32 / SR 38 can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the SR 32 bridge, offset their facilities north or south of the SR 32 / SR 38 Street bridge, or relocate underground. Service connections will also need to be adjusted.

The preferred alternative ties into the existing profile of SR 32 / SR 38 just east of Cumberland Road. Ending the proposed profile east of Cumberland Road will avoid impacting the overhead electrical transmission on the east side of Cumberland Road and the associated reimbursable relocation costs.

All other existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

X. PROPOSED INTERSECTION FACILITY

SR 37

Existing SR 37 is a four lane expressway with four 12-foot travel lanes, four foot inside shoulders, and ten foot outside shoulders. The northbound and southbound travel lanes are separated by a 50 foot open grass median (inside travel lane to inside travel lane). The existing right-of-way along SR 37 varies from mostly 85 feet to 95 feet from centerline on both sides. Many businesses line each side of the SR 37 right-of-way throughout the Study limits. The interchanges proposed in this Study require auxiliary lanes, ramp junctions, and ramp lanes adjacent to SR 37 travel lanes approaching each interchange from each side. Additional right-of-way will be required in many locations adjacent to ramp lanes and junctions. In an effort to minimize the amount of right-of-way required and the impacts to existing businesses, it is proposed that the SR 37 median be enclosed with a center median barrier and the SR 37 travel lanes be shifted in to narrow the width of the roadway through the interchange limits.

A 14.5 foot median is proposed, consisting of six foot inside shoulders and a 2.5 foot median barrier wall. Six foot is the desirable inside shoulder width required using Table 53-6 from the Indiana Design Manual (IDM). See the typical cross sections in this Study for full roadway dimensions. If any, one isolated interchange is constructed, the SR 37 travel lanes would shift back out on the north and south sides of the interchange to match the existing travel lanes and median width. As consecutive interchanges are constructed, it will not be feasible to shift lanes out to the existing median width and back in between most interchanges. If all interchanges were built concurrently, the median would remain enclosed from the south side of 126th Street to the north side of 146th Street, and from the south side of Town & Country Boulevard to the north side of SR 32 / SR 38. As there is sufficient distance between 146th Street and Greenfield Avenue, the travel lanes north of 146th Street could shift out the existing median width even if the 146th Street and Greenfield Avenue interchanges were constructed at the same time or consecutively. Furthermore, because of the layout and surrounding parcels at Greenfield Avenue, it is feasible to maintain the existing open median width through this location even when the proposed interchange is constructed. Where this is cost prohibitive at other locations due to right-of-way and business impacts associated with the wider roadway, it is economically feasible at the Greenfield Avenue Interchange. The travel lanes would shift back into an enclosed median south of Town and Country Boulevard and remain enclosed to north of SR 32 / SR 38, where the lanes would shift back out to meet the existing pavement.

This Study focuses on the interchanges; however the treatment of SR 37 proper, between the interchanges will be affected by each interchange's traffic and proximity to each other. The geometrics developed for this Study are unique to each area between interchanges according to the findings of the Traffic Operations Analysis (TOA) conducted as part of this Study. In each segment between interchanges, in both directions, there will be an entrance ramp junction from one interchange followed by an exit ramp junction to the next interchange. This creates weaving areas between the interchanges, which were analyzed in the TOA. Some weaving areas were acceptable and are recommended. Other weaving areas are not acceptable and have been removed by interconnecting consecutive interchanges with collector distributor lanes. See the TOA for the discussion and results of the weaving analysis conducted between interchanges. Below is a summary of the proposed configuration of SR 37 near SR 32 / SR 38:

SR 32 / SR 38

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on SR 32 / SR 38 consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. SR 32 / SR 38 will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on SR 32 / SR 38 will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the

mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach SR 32 / SR 38. Exterior walls will also be necessary in the southwest, northwest, and northeast quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

SR 32 / SR 38 will have two lanes in each direction through the east/west portion of the roundabouts. On both approaches there will be one shared left/through lane, one through lane, and one right turn lane. The northbound exit ramp will exit as one lane and develop into three lanes at the roundabout approach, consisting of one left turn lane, one shared left/through lane, and one shared through/right lane. The southbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane, and one shared through/right lane. Both entrance ramps will depart from the roundabout as two lanes and merge to one lane before merging into SR 37.

One current drive accesses off SR 32 / SR 38 will need to be removed due to the close proximity to the interchange and the vertical difference of proposed SR 32 / SR 38 in the area of the drive. This drive is the easternmost drive accessing the Valero gas station in the southwest quadrant. This business has another drive off SR 32 / SR 38 approximately 90 feet west of the easternmost drive. This drive can remain, but should be changed to a right-in, right-out access to avoid queuing of westbound SR 32 / SR 38 traffic wishing to turn left into this drive. This business also has a third existing drive off of Cumberland Road. The existing drive off SR 32 / SR 38 accessing the retail plaza in the northwest quadrant can remain, but should be changed to a right-in only drive. This will avoid conflicts between vehicles exiting the west roundabout and vehicles entering SR 32 / SR 38 from this business. This business has a second existing full access drive off of Cumberland Road.

XI. PROPOSED BRIDGE FACILITY

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at SR 32 is anticipated to be a two span, 124'-10" long, prestressed reinforced concrete I beam structure built with a 20 degree skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 181'-10" and an out to out coping of 185'-4". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

XII. MAINTENANCE OF TRAFFIC

The following is a logical basic MOT plan for the construction of the SR 32 / SR 38 interchange:

Phase 1 – The southbound SR 37 travel lanes will be widened to the inside with temporary widening. Temporary cross-overs will be constructed in the median to the north and south of the interchange.

Phase 2 – All SR 37 traffic will run on the southbound side with two travel lanes in each direction. The southbound travel lanes will be shifted west to run on the existing outside shoulder. The northbound traffic will be switched over to the southbound side to run on the temporary widening constructed in phase 1.

The northbound half of mainline SR 37 will be constructed. A temporary cut wall will be constructed “top down” between the existing southbound lanes and the proposed northbound lanes through the interchange area where SR 37 will be depressed.

The northbound exit and entrance ramps will be constructed up to the proposed roundabout. A temporary connection will be constructed across the proposed roundabout area connecting the top of the northbound exit ramp and the top of the northbound entrance ramp.

The east end bent for the proposed bridge will also be constructed in this phase.

The east segment of SR 32 / SR 38 will be closed, with no access to SR 37. The east segment of SR 32 / SR 38 and roundabout approaches will be constructed.

The west segment of the SR 32 / SR 38 will maintain access to SR 37. This could be set up as right-in/right-out access to and from SR 32 / SR 38 with SR 37 traffic remaining free-flow through the intersection. Alternatively, a temporary signal could be utilized to allow the west SR 32 / SR 38 protected access to and from both directions of SR 37.

Phase 3 – All SR 37 traffic will run on the proposed northbound lanes and shoulders constructed in phase 2, with two lanes in each direction. The southbound lanes will be switched over to the northbound side to run on the proposed northbound lanes constructed in phase 2. The northbound lanes will run up the proposed northbound exit ramp, across the temporary connection, and back down the proposed northbound entrance ramp all constructed in phase 2.

The southbound half of mainline SR 37 will be constructed, as well as the west segment of SR 32 / SR 38 and the west roundabout. Both sides of SR 32 / SR 38 will have no access to or from SR 37 in this phase. However, temporary connections could be constructed on the east side between the portion of the east SR 32 / SR 38 segment constructed in phase 2 and the northbound SR 37 travel lanes. If desired, this could be done to keep access to and from northbound SR 37 and the east side of SR 32 / SR 38 in this phase.

XIII. LAND ACQUISITION

Approximately 22 parcels would be impacted by the construction of the teardrop roundabout interchange at the intersection of SR 37 and SR 32 / SR 38. Total permanent right of way acquisition required for construction of these improvements would be approximately 3.0 acres.

Because the project would likely utilize federal aid, future land acquisition would need to adhere to the *Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs Act*. This process includes title research, right-of-way engineering, appraisal problem analysis (APA), an appraisal, a review appraisal and negotiations/buying with the property owner.

All existing right-of-way would be verified during the land acquisition process, which may reveal the need for additional parcels. If recorded documents do not exist, it may be necessary to reacquire portions of the apparent existing right-of-way, which could also increase the anticipated number of parcels and costs affiliated with those additional parcels.

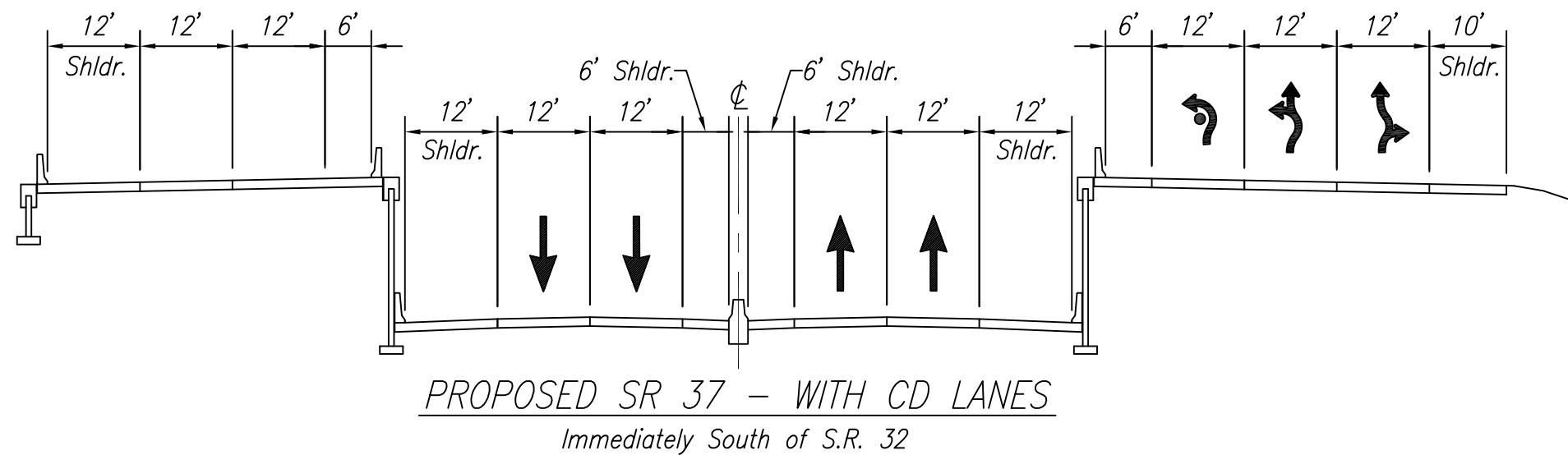
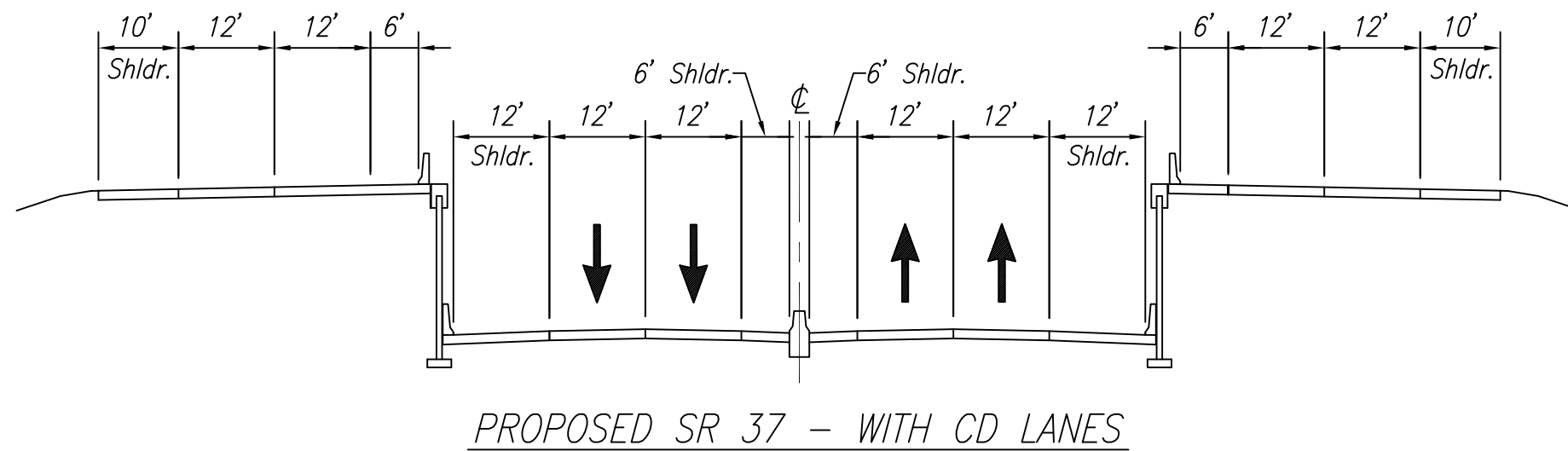
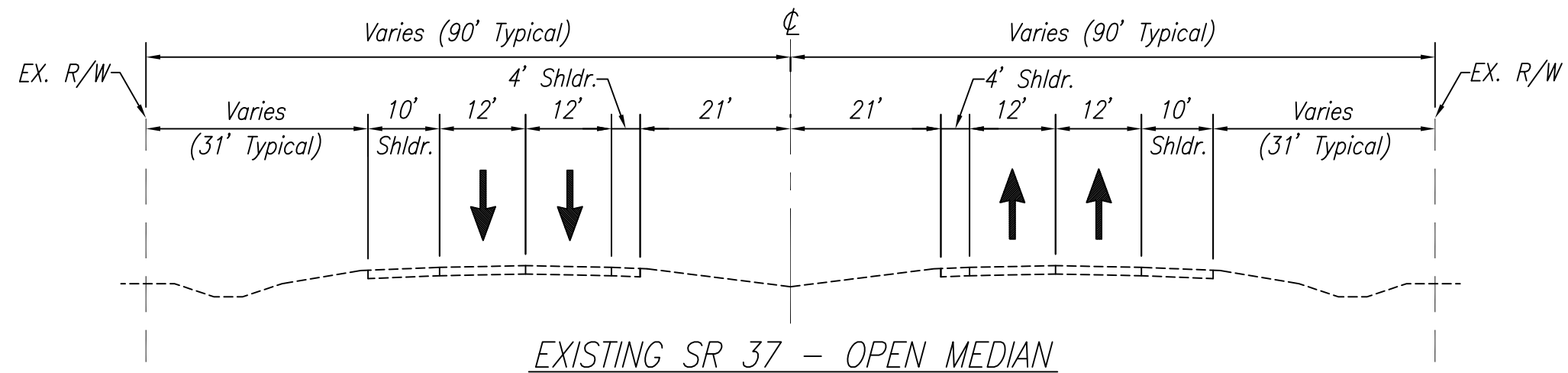
XIV. PROJECT PRIORITIES

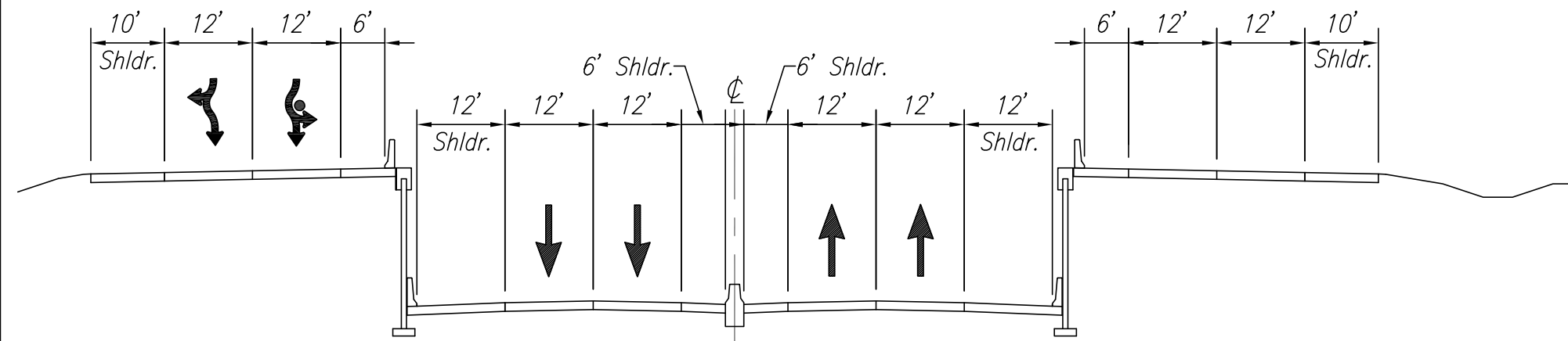
Table 3 below indicates the priority for construction of the proposed improvements. The ranking as shown generally flows south to north but can be revised without affecting the integrity of constructing methodologies.

Table 3 – Construction Priorities		
Priority Rank	Binder Number	Intersection
1.	5	SR 37 at 146 th Street
2.	10	146 th Street at Allisonville Road
3.	1	SR 37 at 126 th Street
4.	2	SR 37 at 131 st Street
5.	3	SR 37 at 135 th Street
6.	4	SR 37 at 141 st Street
7.	6	SR 37 at Greenfield Avenue
8.	7	SR 37 at Town and Country Boulevard
9.	8	SR 37 at Pleasant Street
10.	9	SR 37 at SR 32 / SR 38

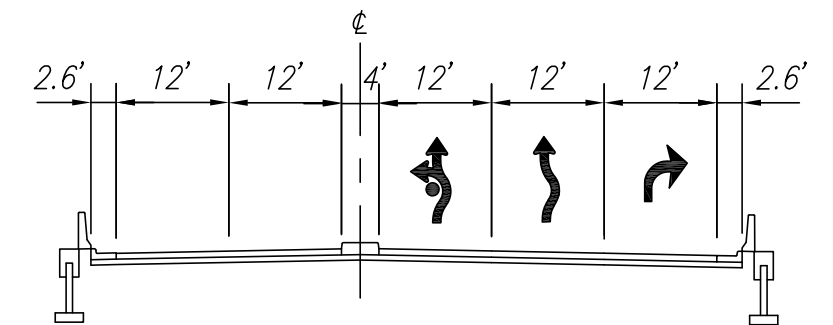
XV. PROJECT BUDGET

At the intersection of SR 37 and SR 32 / SR 38, a teardrop roundabout interchange is proposed, with a 6-lane bridge crossing SR 37. In order to construct these improvements, it is anticipated that construction cost will be \$27,725,110 in year 2027.

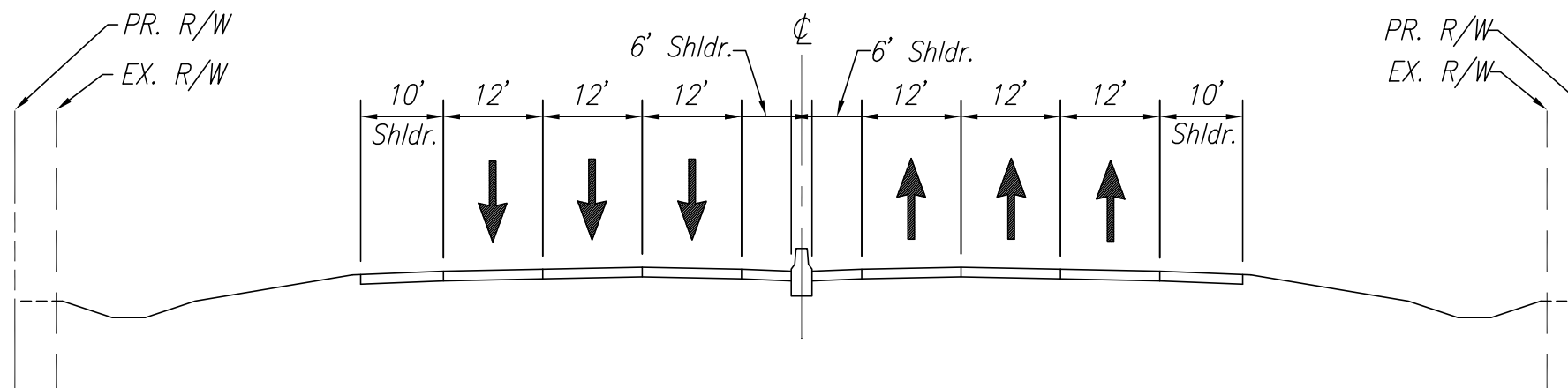




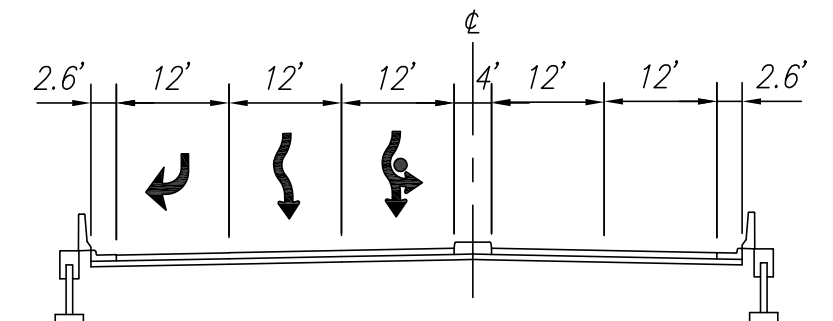
PROPOSED SR 37 – WITH CD LANES
Immediately Northside of S.R. 32



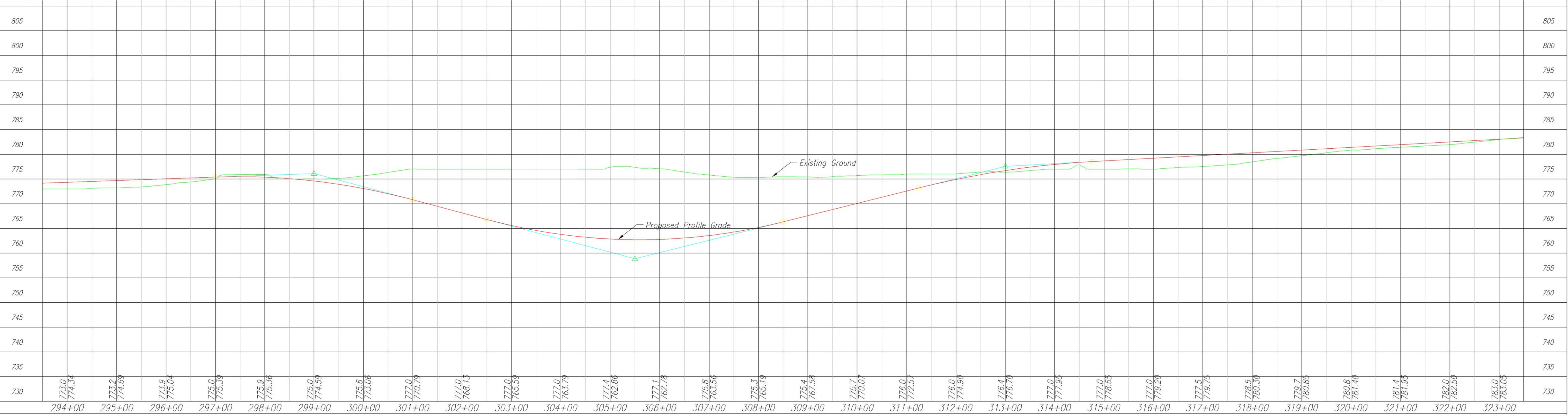
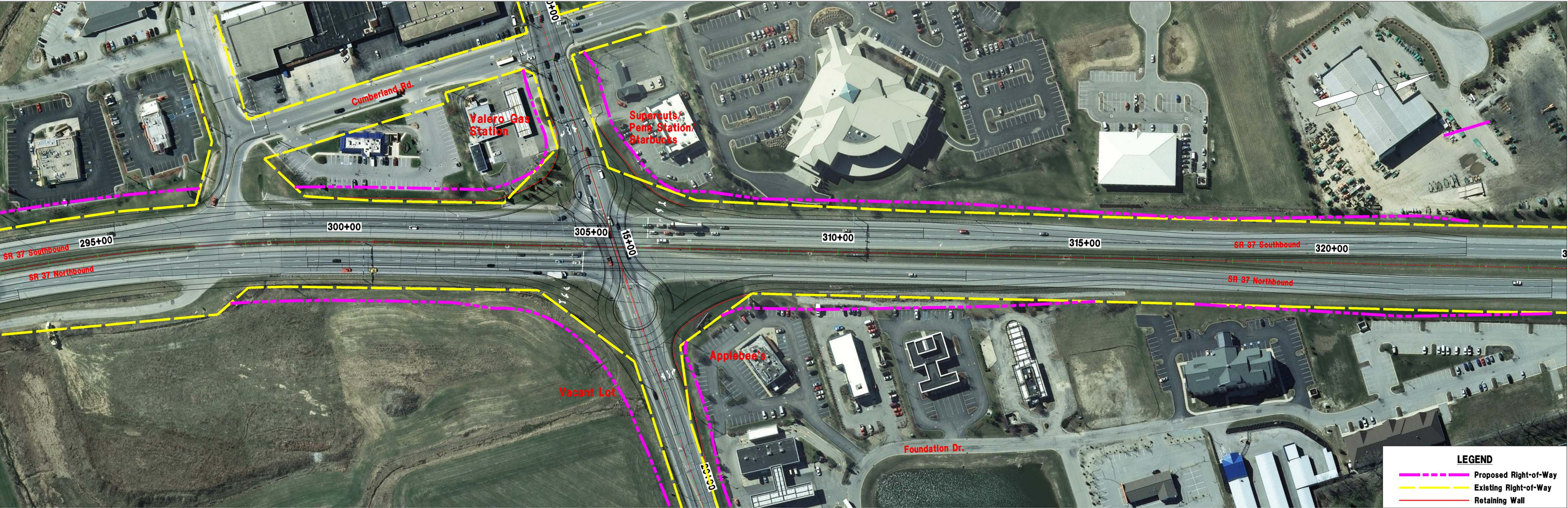
PROPOSED S.R. 32
East leg approaching intersection



PROPOSED SR 37 – ENCLOSED MEDIAN
North of S.R. 32



PROPOSED S.R. 32
East leg departing intersection

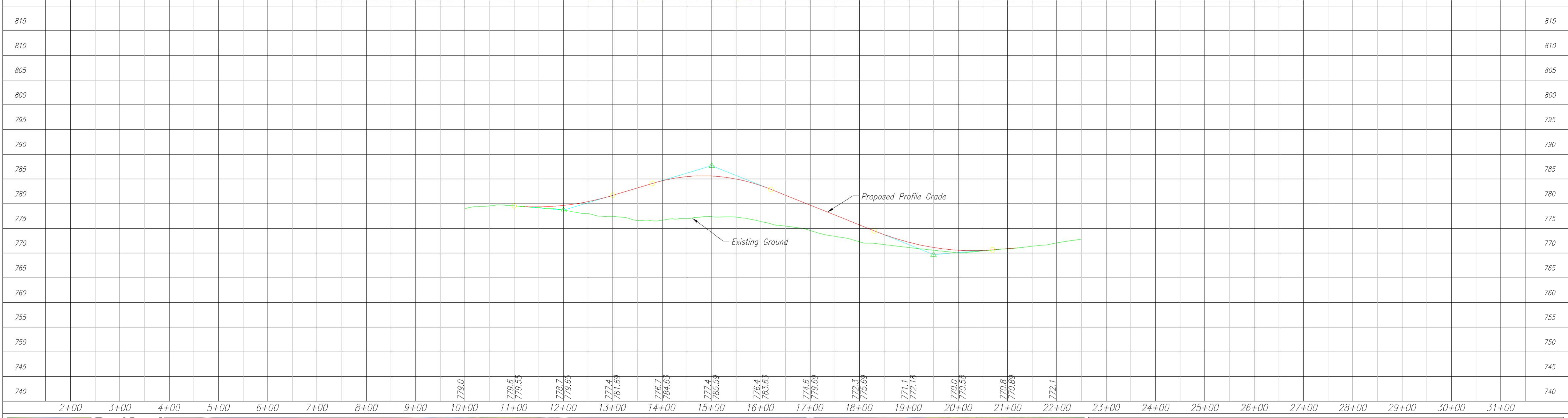
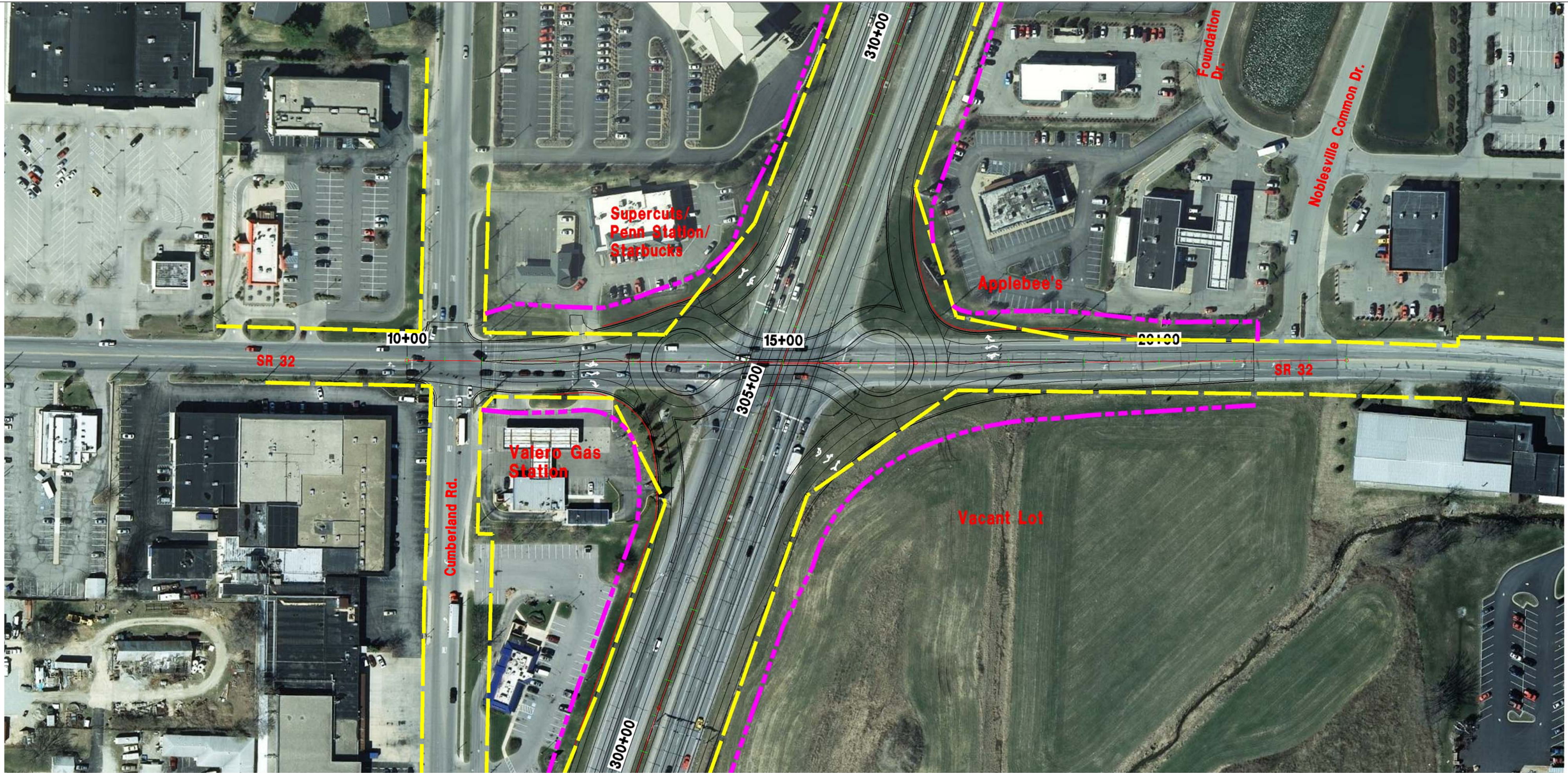




SR 37 MOBILITY STUDY



**PROPOSED TEARDROP
ROUNDAABOUT INTERCHANGE
SR 37 & SR 38**





SR 37 MOBILITY STUDY



**PROPOSED TEARDROP
ROUNDAABOUT INTERCHANGE
SR 37 & SR 32**



SR 32 Project Development Cost Summary

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville
S.R. 37 from South of 126th Street to North of SR 38/32

PROJECT ITEMS:		PROJECT COST (IN YEAR OF EXPENDITURE)
SR 32		
Engineering Costs	\$	4,194,809
Construction Costs	\$	27,725,110
Construction Cost Contingencies	\$	2,772,511
Construction Inspection Costs	\$	4,158,766
Utility Relocation Cost	\$	-
Land Cost	\$	1,620,637
Subtotal SR 32 Interchange		\$36,277,024

* The SR 32/SR 38 Street Interchange is projected to be constructed in 2027. An inflation factor of 1.605 has been applied to obtain the construction cost shown in this table

TOTAL INTERCHANGE COST: \$36,277,024





SR 32 Construction Cost Summary

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville
S.R. 37 from South of 126th Street to North of SR 38/32

MAJOR ELEMENT	BASE YEAR CONSTRUCTION COST (2012)
ROADWAY	\$ 12,409,212
GEOTECHNICAL MITIGATION	\$ 1,000,000
BRIDGE (S.R. 32 Over S.R. 37)	\$ 2,750,000
LIFT STATION	\$ 1,115,000
TOTAL CONSTRUCTION COST:	\$ 17,274,212



ROAD ESTIMATE

PRICING REPORTDate: 12/19/2012
Time: 14:31:50Project: **SR 37 Mobility Study - SR 32/SR 38**
Location: **SR 32/SR 38 Interchange**
County: **HAMILTON**
District: **Greenfield**Project ID: **10-703 (9)**
Bid Date: **/ /** State: **IN**
Route: **SR 37**

Sect	Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
100	105-06845	construction engineering	1.000	L.S.	332,389.61	332,389.61	
100	110-01001	mobilization and demobilization	1.000	L.S.	553,982.68	553,982.68	
GENERAL PROVISIONS SUBTOTALS						886,372.29	
						7.1%	
200	201-52370	clearing right of way	1.000	L.S.	179,170.80	179,170.80	
200	202-02279	curb and gutter, remove	226.000	L.F.	4.62	1,044.12	
200	202-52710	sidewalk, concrete, remove	94.000	SYS	7.88	740.72	
200	202-93999	signal pole, remove	4.000	EACH	495.00	1,980.00	
200	203-02000	excavation, common	80,574.000	C.Y.	7.88	634,923.12	
200	205-06931	temporary check dam, revetment riprap	338.000	TON	38.84	13,127.92	
200	205-06937	temporary silt fence	500.000	L.F.	1.74	870.00	
200	207-08263	subgrade treatment, type ia	62,025.000	SYS	6.24	387,036.00	
200	207-08267	subgrade treatment, type iia	60.000	SYS	9.42	565.20	
200	211-09194	b borrow	31,698.000	TON	34.00	1,077,732.00	
200	211-09264	structural backfill, type 1	829.000	C.Y.	23.88	19,796.52	
200	211-09266	structural backfill, type 3	25,098.000	C.Y.	21.27	533,834.46	
EARTHWORK SUBTOTALS						2,850,820.86	
						23.0%	
300	301-07448	compacted aggregate, no. 53, base	5,084.000	TON	15.66	79,615.44	
300	302-06464	subbase for pccp	15,507.000	C.Y.	28.39	440,243.73	
300	303-01180	compacted aggregate, no. 53	2,079.000	TON	17.20	35,758.80	
AGGREGATE PAVEMENT AND BASES SUBTOTALS						555,617.97	
						4.5%	
400	402-10084	hma for temporary pavement, b	4,524.000	TON	50.00	226,200.00	
ASPHALT PAVEMENT SUBTOTALS						226,200.00	
						1.8%	
500	501-06266	profilograph, pccp	1.000	L.S.	15,000.00	15,000.00	
500	501-06323	qc/qa-pccp, 12 in	52,210.000	SYS	70.00	3,654,700.00	
500	503-05240	d-1 contraction joint	26,105.000	L.F.	9.19	239,904.95	
CONCRETE PAVEMENT SUBTOTALS						3,909,604.95	
						31.5%	
600	601-01522	guardrail, transition type tqb	2.000	EACH	1,978.24	3,956.48	
600	601-94689	guardrail end treatment, os	2.000	EACH	2,530.55	5,061.10	
600	601-99105	guardrail, w-beam, 6 ft 3 in spacing	805.000	L.F.	17.42	14,023.10	
600	602-06729	barrier delineator	66.000	EACH	12.49	824.34	
600	602-08603	concrete barrier, 45 in	2,612.000	L.F.	91.00	237,692.00	
600	603-06040	fence, farm field, 47 in	5,738.000	L.F.	5.50	31,559.00	
600	604-07569	pavers {pavers}	491.000	SYS	827.77	406,435.07	
600	605-06120	curb, concrete	619.000	L.F.	23.58	14,596.02	
600	605-06140	curb and gutter, concrete	3,037.000	L.F.	14.29	43,398.73	
600	605-06145	curb and gutter, b, concrete	846.000	L.F.	14.17	11,987.82	
600	605-06255	center curb, d, concrete	346.000	SYS	48.55	16,798.30	
600	610-08516	pccp for approaches, 12 in	1,303.000	SYS	108.57	141,466.71	
600	610-09108	pccp for approaches, 9 in	60.000	SYS	57.06	3,423.60	
600	615-06510	monument, c	5.000	EACH	419.32	2,096.60	

PRICING REPORTDate: 12/19/2012
Time: 14:31:50Project: **SR 37 Mobility Study - SR 32/SR 38**
Location: **SR 32/SR 38 Interchange**
County: **HAMILTON**
District: **Greenfield**Project ID: **10-703 (9)**
Bid Date: **/ /** State: **IN**
Route: **SR 37**

Sect	Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
600	615-06515	monument, d	25.000	EACH	141.25	3,531.25	
600	621-01004	mobilization and demobilization for seeding	4.000	EACH	382.61	1,530.44	
600	621-06545	fertilizer	5.000	TON	327.69	1,638.45	
600	621-06554	seed mixture, u	1,144.000	LBS	5.62	6,429.28	
600	621-06557	seed mixture, t	505.000	LBS	2.15	1,085.75	
600	621-06565	mulching material	21.000	TON	305.97	6,425.37	
600	621-06567	water	12.000	M.G.	3.74	44.88	
600	621-06574	sodding	2,878.000	SYS	3.12	8,979.36	
600	628-09403	field office, c	18.000	MONTH	2,082.44	37,483.92	
600	628-11068	cellular telephone/radio	2.000	EACH	150.38	300.76	
600	628-11069	cellular telephone/radio service, anytime minutes {cell phone}	36.000	MONTH	112.11	4,035.96	

INCIDENTAL CONSTRUCTION SUBTOTALS**1,004,804.29**
8.1%

700	701-90386	temporary sheet piling	1.000	L.S.	308,925.00	308,925.00	
700	706-08496	reinforced concrete moment slab, 12 in	2,234.000	SYS	87.86	196,279.24	
700	706-09545	coarse aggregate, no 8	559.000	C.Y.	61.00	34,099.00	
700	706-09959	railing, concrete, ft	6,361.000	L.F.	60.00	381,660.00	
700	715-05048	pipe, type 4 circular 6 in	14,354.000	L.F.	3.24	46,506.96	
700	715-05053	pipe, underdrain, outlet 6 in	324.000	L.F.	11.77	3,813.48	
700	715-05149	pipe, type 2 circular 12 in	5,593.000	L.F.	29.00	162,197.00	
700	715-09064	video inspection for pipe	5,593.000	L.F.	1.48	8,277.64	
700	718-06528	outlet protector, 1	12.000	EACH	519.56	6,234.72	
700	718-06532	video inspection for underdrains	3,000.000	L.F.	0.94	2,820.00	
700	718-52610	aggregate for underdrains	1,292.000	C.Y.	32.72	42,274.24	
700	718-99153	geotextiles for underdrain	9,836.000	SYS	0.98	9,639.28	
700	720-07300	inlet, type h, with slotted drain	12.000	EACH	4,502.79	54,033.48	
700	720-07302	inlet, type ha, with slotted drain	12.000	EACH	1,757.88	21,094.56	
700	720-45410	manhole, c4	12.000	EACH	2,000.00	24,000.00	
700	720-98174	inlet, b15	12.000	EACH	2,189.87	26,278.44	
700	720-98555	inlet, c15	12.000	EACH	2,161.77	25,941.24	
700	731-93945	face panels, concrete	57,288.000	S.F.	11.99	686,883.12	
700	731-93946	wall erection	57,288.000	S.F.	5.56	318,521.28	
700	731-93947	leveling pad, concrete	3,995.000	L.F.	22.00	87,890.00	

STRUCTURES SUBTOTALS**2,447,368.68**
19.7%

800	801-01093	temporary worksite speed limit sign assembly	4.000	EACH	723.00	2,892.00	
800	801-03290	construction sign, c	2.000	EACH	199.19	398.38	
800	801-04308	road closure sign assembly	4.000	EACH	308.61	1,234.44	
800	801-06625	detour route marker assembly	18.000	EACH	98.84	1,779.12	
800	801-06640	construction sign, a	24.000	EACH	160.87	3,860.88	
800	801-06645	construction sign, b	4.000	EACH	58.33	233.32	
800	801-06710	flashing arrow sign	510.000	DAY	8.52	4,345.20	
800	801-06775	maintaining traffic	1.000	L.S.	221,593.07	221,593.07	

PRICING REPORTDate: 12/19/2012
Time: 14:31:51Project: **SR 37 Mobility Study - SR 32/SR 38**
Location: **SR 32/SR 38 Interchange**
County: **HAMILTON**
District: **Greenfield**Project ID: **10-703 (9)**
Bid Date: **/ /** State: **IN**
Route: **SR 37**

Sect	Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
800	801-07024	energy absorbing terminal, cz, tl-3	1.000	EACH	7,316.67	7,316.67	
800	801-07118	barricade, iii-a	228.000	L.F.	13.17	3,002.76	
800	801-07119	barricade, iii-b	48.000	L.F.	14.08	675.84	
800	801-08400	temporary traffic barrier, type 1	3,300.000	L.F.	16.86	55,638.00	
800	801-08507	temporary traffic barrier, type 1, anchored	296.000	L.F.	34.09	10,090.64	
800	801-08508	temporary traffic barrier, type 2, anchored	3,300.000	L.F.	25.00	82,500.00	
800	801-09133	temporary changeable message sign	2.000	EACH	6,193.01	12,386.02	
800	801-52817	temporary crossover, b	2.000	EACH	25,000.00	50,000.00	
800	802-05701	sign post, square, type 1, reinforced anchor base	340.000	L.F.	12.95	4,403.00	
800	802-07057	sign, panel, with legend	429.000	S.F.	14.81	6,353.49	
800	802-07138	wide flange sign post support foundation, ix	2.000	EACH	242.00	484.00	
800	802-07159	cantilever sign support foundation, ii	2.000	EACH	3,349.33	6,698.66	
800	802-09840	sign, sheet, with legend 0.100 in thickness	115.000	S.F.	17.27	1,986.05	
800	802-76095	structural steel, breakaway	681.000	LBS	2.68	1,825.08	
800	802-76135	overhead sign structure, cantilever single arm	1.000	EACH	20,672.00	20,672.00	
800	804-06770	delineator post	12.000	EACH	43.14	517.68	
800	808-10031	line, multi-component, broken, white, 4 in	2,513.000	L.F.	0.43	1,080.59	
800	808-10033	line, multi-component, solid, white, 4 in	10,410.000	L.F.	0.46	4,788.60	
800	808-10034	line, multi-component, solid, yellow, 4 in	9,366.000	L.F.	0.46	4,308.36	
800	808-10037	line, multi-component, solid, white, 8 in	4,348.000	L.F.	1.04	4,521.92	
800	808-75071	pavement message marking, preformed plastic, lane indication arrow	11.000	EACH	187.00	2,057.00	
800	808-75510	transverse markings, preformed plastic, crosshatch line, white, 24 in	549.000	L.F.	12.09	6,637.41	
800	808-75998	snowplowable raised pavement marker	213.000	EACH	19.45	4,142.85	

TRAFFIC CONTROL DEVICES AND LIGHTING SUBTOTALS**528,423.03**
4.3%**TOTALS****12,409,212.07**
100.0%

BRIDGE ESTIMATE

JTB 11/26/12
JEC 11/26/12

PRICING REPORT

Date: 11/26/2012
Time: 15:23:36

Project: **SR32 over SR 37 - Concrete Bridge Option**
Location: **Hamilton County**
County: **HAMILTON**
District: **Greenfield**

Project ID: **10-703-SR32 OVER SR3**
Bid Date: **/ /** State: **IN**
Route:

Pay Item	Description	Quantity	Unit	Bid Price	Extension	Alt
105-06845	construction engineering	1.000	L.S.	75,700.00	75,700.00	
110-01001	mobilization and demobilization	1.000	L.S.	126,168.00	126,168.00	
203-02020	excavation, unclassified	533.000	C.Y.	20.83	11,102.39	
211-02050	b borrow	533.000	C.Y.	27.42	14,614.86	
302-07455	dense graded subbase	256.000	C.Y.	62.94	16,112.64	
609-06259	reinforced concrete bridge approach 12 in	1,539.000	SYS	83.33	128,244.87	
701-06011	dynamic pile load test	3.000	EACH	1,651.34	4,954.02	
701-08122	pile, steel pipe, 0.375", 14	5,460.000	L.F.	42.87	234,070.20	
701-09559	test pile, dynamic, restrike	3.000	EACH	1,317.82	3,953.46	
701-09690	test pile, dynamic, 14 in non-production	210.000	L.F.	42.87	9,002.70	
702-51005	concrete, a, substructure	287.000	C.Y.	584.17	167,656.79	
702-51015	concrete, b, footings	197.000	C.Y.	307.53	60,583.41	
703-06028	reinforcing bars	58,980.000	LBS	0.91	53,671.80	
703-06029	reinforcing bars, epoxy coated	439,486.000	LBS	0.95	417,511.70	
704-51002	concrete, c, superstructure	1,683.000	C.Y.	560.34	943,052.22	
706-09959	railing, concrete, ft	250.000	L.F.	64.42	16,105.00	
707-05983	structural member, concrete i-beam, 36 in x 12 in	2,590.000	L.F.	160.01	414,425.90	
709-51821	surface seal	1.000	L.S.	28,288.00	28,288.00	

TOTALS	2,725,217.96
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LIFT STATION ESTIMATE

S.R. 32/38 Lift Station Cost Summary

GENERAL INFORMATION

Intersection	S.R. 32/38 and S.R. 37
Station (of Lift Station)	305+49.19

DESIGN INFORMATION

Storm Sewer Inflow Elev	758.7
Length to Outfall (ft)	1290.0
Outfall Elevation	760.00
High Point Station	297+46.63
High Point Elevation	775.47
Revised Outfall Elevation	771.47
Revised Distance to Outfall	803.0
Drainage Area (ac)	2.44
10-Year Flow Q_{10} (cfs)	10.50
50-Year Flow Q_{50} (cfs)	13.04
100-Year Flow Q_{100} (cfs)	14.12

CONSTRUCTION COST

Estimated Lift Station Construction Cost	\$ 950,000.00
Estimated Force Main Construction Cost	\$ 165,000.00
Total Estimated Construction Cost	\$ 1,115,000.00

OPERATION & MAINTENANCE COST

Operation	\$ 10,000.00
Maintenance	\$ 15,000.00
Equipment Replacement	\$ 15,000.00
Total Annual OM&R Cost	\$ 40,000.00

ROAD QUANTITIES

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 3/27/12

Checked By: ATW 11/24/12

105-06845

CONSTRUCTION ENGINEERING

1
LS

[illegible]

<i>TOTAL</i>	<i>1.0</i>
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 3/27/12

Checked By: ATW 11/24/12

110-01001

MOBILIZATION AND DEMOBILIZATION

1
LS[illegible]

<i>TOTAL</i> =	<i>1.0</i>
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10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 3/27/12 </u>	Checked By: <u> ATW 11/24/12 </u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	Checked By: <u> <i>ATW</i> </u>	<i>3/27/12</i>
201-52370	CLEARING RIGHT OF WAY	1 LS

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 3/27/12 </u>	Checked By: <u> ATW 11/24/12 </u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 3/27/12 </u>	Checked By: <u> ATW 11/24/12 </u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>3/27/12</i></u>	Checked By: <u> <i>ATW</i> <i>11/24/12</i></u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 3/27/12 </u>	Checked By: <u> ATW 11/24/12 </u>	
201-52370	CLEARING RIGHT OF WAY	1 LS

[illegible]

						TOTAL =	1.0
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: srs 4/17/12

Checked By: BWS 11/24/12

202-93999

SIGNAL POLE, REMOVE

4
EACH

[illegible]

TOTAL = 4.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	Checked By: <u> <i>srp</i> </u>	<u> <i>10/30/12</i> </u>
203-02000	EXCAVATION, COMMON	80,574 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>10/30/12</i> </u>	Checked By: <u> <i>srp</i> <i>11/26/12</i> </u>	
203-02000	EXCAVATION, COMMON	80,574 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	Checked By: <u> <i>srp</i> </u>	<u> <i>10/30/12</i> </u>
203-02000	EXCAVATION, COMMON	80,574 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>10/30/12</i> </u>	Checked By: <u> <i>srp</i> <i>11/26/12</i> </u>	
203-02000	EXCAVATION, COMMON	80,574 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	Checked By: <u> <i>srp</i> </u>	<u> <i>10/30/12</i> </u>
203-02000	EXCAVATION, COMMON	80,574 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>10/30/12</i> </u>	Checked By: <u> <i>srp</i> <i>11/26/12</i> </u>	
203-02000	EXCAVATION, COMMON	80,574 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>10/30/12</i> </u>	Checked By: <u> <i>srp</i> <i>11/26/12</i> </u>	
203-02000	EXCAVATION, COMMON	80,574 CYS

[illegible]

	<i>TOTAL =</i>	80574.0
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u>MAC</u>	<u>5/29/12</u>	Checked By: <u>JPS</u>
205-06931	TEMPORARY CHECK DAM, REVETMENT RIPRAP	338 TON

[illegible]

	<i>TOTAL =</i>	338.0
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: MAC 4/10/12

Checked By: JPS 11/21/12

205-06937

TEMPORARY SILT FENCE

500
LFT

[illegible]

TOTAL =	500.0
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**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: SRS 5/15/12Checked By: ATW 11/25/12**207-08263****SUBGRADE TREATMENT, TYPE IA****62,025
SYS**

<i>Begin Station</i>	<i>End Station</i>	<i>Side</i>	<i>Begin Width</i>	<i>End Width</i>	<i>Area (sft)</i>	<i>Area (sys)</i>
Pavement Area copied from 501-06323:						52210.0
Outside Area (2' on either side):						
Line "A"						
293+28.79	299+25.38	Rt	2.00	2.00	1193.18	132.6
299+25.38	312+60.85	Rt	2.00	2.00	2670.94	296.8
312+60.85	315+57.89	Rt	2.00	2.00	594.08	66.0
315+57.89	316+29.21	Rt	2.00	2.00	142.64	15.8
316+29.21	319+40.40	Rt	2.00	2.00	622.38	69.2
319+40.40	321+47.60	Rt	2.00	2.00	414.40	46.0
321+47.60	324+47.59	Rt	2.00	2.00	599.98	66.7
293+28.79	295+39.90	Lt	2.00	2.00	422.22	46.9
295+39.90	296+36.81	Lt	2.00	2.00	193.82	21.5
296+36.81	296+81.62	Lt	2.00	2.00	89.62	10.0
296+81.62	297+43.79	Lt	2.00	2.00	124.34	13.8
297+43.79	298+37.20	Lt	2.00	2.00	186.82	20.8
298+37.20	311+72.77	Lt	2.00	2.00	2671.14	296.8
311+72.77	317+10.51	Lt	2.00	2.00	1075.48	119.5
317+10.51	317+76.96	Lt	2.00	2.00	132.90	14.8
317+76.96	321+72.34	Lt	2.00	2.00	790.76	87.9
321+72.34	322+72.77	Lt	2.00	2.00	200.86	22.3
Ramp "SR32_SE"						
10+00.00	12+80.52	Rt	2.00	2.00	561.04	62.3
12+80.52	13+80.52	Rt	2.00	2.00	200.00	22.2
13+80.52	14+08.55	Rt	2.00	2.00	56.06	6.2
14+08.55	16+04.04	Rt	2.00	2.00	390.98	43.4
Add Extra 2' where there is curb on ramp						
14+08.55	14+85.32		2.00	2.00	153.54	17.1
14+85.32	16+04.04		4.00	4.00	474.88	52.8
Ramp "SR32_SW"						
20+00.00	21+54.06	Lt	2.00	2.00	308.12	34.2
21+54.06	21+96.09	Lt	2.00	2.00	84.06	9.3
21+96.09	26+10.90	Lt	2.00	2.00	829.62	92.2
Add Extra 2' where there is curb on ramp						
20+00.00	21+54.06		4.00	4.00	616.24	68.5
21+54.06	21+96.09		2.00	2.00	84.06	9.3
Ramp "SR32_NW"						
40+00.00	43+39.17	Lt	2.00	2.00	678.34	75.4
43+39.17	44+38.69	Lt	2.00	2.00	199.04	22.1
44+38.69	44+59.33	Lt	2.00	2.00	41.28	4.6
44+59.33	44+89.87	Lt	2.00	2.00	61.08	6.8
44+89.87	46+07.08	Lt	2.00	2.00	234.42	26.0
Add Extra 2' where there is curb on ramp						
44+59.33	44+89.78		2.00	2.00	60.90	6.8
44+89.78	46+07.08		4.00	4.00	469.20	52.1

SUBTOTAL (THIS PAGE) =**54168.7**

10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: SRS 5/15/12Checked By: ATW 11/25/12

207-08263

SUBGRADE TREATMENT, TYPE IA

SYS

Begin Station	End Station	Begin Width	End Width	End Width	Area (sft)	Area (sys)
Ramp "SR32_NE"						
30+00.00	31+79.72	Rt	2.00	2.00	359.44	39.9
31+79.72	32+21.47	Rt	2.00	2.00	83.50	9.3
32+21.47	33+13.58	Rt	2.00	2.00	184.22	20.5
33+13.58	36+13.58	Rt	2.00	2.00	600.00	66.7
Add Extra 2' where there is curb on ramp						
30+00.00	31+76.46		4.00	4.00	705.84	78.4
31+76.46	32+21.47		2.00	2.00	90.02	10.0
Cumberland Road/SR 32 Intersection						
NW Quadrant	45.6	lft	2.00		91.20	10.1
NE Quadrant	40.0	lft	2.00		80.00	8.9
SE Quadrant	32.0	lft	2.00		64.00	7.1
SW Quadrant	61.0	lft	2.00		122.00	13.6
Roundabout						
outside area (4' offset of roundabout area)			subtract inside area			
100576.42			15540.33		83272.68	9252.5
			1763.41			
Subtract from bridge area:						
					6046.99	-671.9
Subtract pavement from moment slab						
NE Wall					7901.96	-878.0
SE Wall	No Wall					
SW Wall					8040.83	-893.4
NW Wall					4156.85	-461.9
Add Approaches at Cumberland Road Intersection						
North Approach					1555	172.8
South Approach					1636	181.8
297+25 "A", Lt.					8004	889.3

SUBTOTAL (THIS PAGE) = 7855.7

TOTAL = 62024.4

TOTAL =	59.0
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>SRS</i> <i>11/16/12</i></u>	Checked By: <u> <i>srp</i> <i>11/26/12</i></u>	
211-09194	B BORROW	31,698 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
<i>By: SRS 11/16/12</i>	<i>Checked By: srp 11/26/12</i>	
211-09194	B BORROW	31,698 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
<i>By: SRS 11/16/12</i>	<i>Checked By: srp 11/26/12</i>	
211-09194	B BORROW	31,698 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
<i>By: SRS 11/16/12</i>	<i>Checked By: srp 11/26/12</i>	
211-09194	B BORROW	31,698 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
<i>By: SRS 11/16/12</i>	<i>Checked By: srp 11/26/12</i>	
211-09194	B BORROW	31,698 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
<i>By: SRS 11/16/12</i>	<i>Checked By: srp 11/26/12</i>	
211-09194	B BORROW	31,698 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
<i>By: SRS 11/16/12</i>	<i>Checked By: srp 11/26/12</i>	
211-09194	B BORROW	31,698 TON

[illegible]

		TOTAL =		31697.7
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SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 11/19/12

Checked By: BWC 11/25/12

211-09264

STRUCTURAL BACKFILL, TYPE 1

829
CYS[illegible]

<i>TOTAL</i> =	828.6
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SR 37 MOBILITY STUDY
SR 32/SR 38

By: SRS 10/22/12

Checked By: srp 11/26/12

211-09266

STRUCTURAL BACKFILL, TYPE 3

**25,099
CYS**

[illegible]

TOTAL this page =		3116.7
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	5,084 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	5,084 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	5,084 TON

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	5,084 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	5,084 TON

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	5,084 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
301-07448	COMPACTED AGGREGATE, NO. 53, BASE	5,084 TON

[illegible]

	<i>TOTAL =</i>	5083.3
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10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: SRS 5/16/12Checked By: ATW 11/25/12**302-06464****SUBBASE FOR PCCP****15,507
CYS**

Begin Station	End Station	Begin Width	End Width	Area (sft)	Depth (ft)	Volume (cys)
Pavement Area copied from 501-06323 multiplied by 9:				469889.08	0.75	13052.5
Outside Area (2' on either side):						
Line "A"						
293+28.79	299+25.38	2.00	2.00	1193.18	0.75	33.1
299+25.38	312+60.85	2.00	2.00	2670.94	0.75	74.2
312+60.85	315+57.89	2.00	2.00	594.08	0.75	16.5
315+57.89	316+29.21	2.00	2.00	142.64	0.75	4.0
316+29.21	319+40.40	2.00	2.00	622.38	0.75	17.3
319+40.40	321+47.60	2.00	2.00	414.40	0.75	11.5
321+47.60	324+47.59	2.00	2.00	599.98	0.75	16.7
293+28.79	295+39.90	2.00	2.00	422.22	0.75	11.7
295+39.90	296+36.81	2.00	2.00	193.82	0.75	5.4
296+36.81	296+81.62	2.00	2.00	89.62	0.75	2.5
296+81.62	297+43.79	2.00	2.00	124.34	0.75	3.5
297+43.79	298+37.20	2.00	2.00	186.82	0.75	5.2
298+37.20	311+72.77	2.00	2.00	2671.14	0.75	74.2
311+72.77	317+10.51	2.00	2.00	1075.48	0.75	29.9
317+10.51	317+76.96	2.00	2.00	132.90	0.75	3.7
317+76.96	321+72.34	2.00	2.00	790.76	0.75	22.0
321+72.34	322+72.77	2.00	2.00	200.86	0.75	5.6
Ramp "SR32_SE"						
10+00.00	12+80.52	Rt	2.00	561.04	0.75	15.6
12+80.52	13+80.52	Rt	2.00	200.00	0.75	5.6
13+80.52	14+08.55	Rt	2.00	56.06	0.75	1.6
14+08.55	16+04.04	Rt	2.00	390.98	0.75	10.9
Add Extra 2' where there is curb on ramp						
14+08.55	14+85.32		2.00	153.54	0.75	4.3
14+85.32	16+04.04		4.00	474.88	0.75	13.2
Ramp "SR32_SW"						
20+00.00	21+54.06	Lt	2.00	308.12	0.75	8.6
21+54.06	21+96.09	Lt	2.00	84.06	0.75	2.3
21+96.09	26+10.90	Lt	2.00	829.62	0.75	23.0
Add Extra 2' where there is curb on ramp						
20+00.00	21+54.06		4.00	616.24	0.75	17.1
21+54.06	21+96.09		2.00	84.06	0.75	2.3
Ramp "SR32_NW"						
40+00.00	43+39.17	Lt	2.00	678.34	0.75	18.8
43+39.17	44+38.69	Lt	2.00	199.04	0.75	5.5
44+38.69	44+59.33	Lt	2.00	41.28	0.75	1.1
44+59.33	44+89.87	Lt	2.00	61.08	0.75	1.7
44+89.87	46+07.08	Lt	2.00	234.42	0.75	6.5
Add Extra 2' where there is curb on ramp						
44+59.33	44+89.78		2.00	60.90	0.75	1.7
44+89.78	46+07.08		4.00	469.20	0.75	13.0

SUBTOTAL (THIS PAGE) = 13542.2

10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: SRS 5/16/12Checked By: ATW 11/25/12

302-06464

SUBBASE FOR PCCP

CYS

Begin Station	End Station	Begin Width	End Width	Area (sft)	Depth (ft)	Volume (cys)
Ramp "SR32_NE"						
30+00.00	31+79.72	Rt	2.00	359.44	0.75	10.0
31+79.72	32+21.47	Rt	2.00	83.50	0.75	2.3
32+21.47	33+13.58	Rt	2.00	184.22	0.75	5.1
33+13.58	36+13.58	Rt	2.00	600.00	0.75	16.7
Add Extra 2' where there is curb on ramp						
30+00.00	31+76.46		4.00	705.84	0.75	19.6
31+76.46	32+21.47		2.00	90.02	0.75	2.5
Cumberland Road/SR 32 Intersection						
NW Quadrant	45.6	lft	2.00		0.75	2.5
NE Quadrant	40.0	lft	2.00		0.75	2.2
SE Quadrant	32.0	lft	2.00		0.75	1.8
SW Quadrant	61.0	lft	2.00		0.75	3.4
Roundabout						
outside area (4' offset of roundabout area)			subtract inside area			
100576.42			15540.33		0.75	2313.1
			1763.41			
Subtract from bridge area:						
				6046.99	0.75	-168.0
Subtract pavement from moment slab						
NE Wall				7901.96	0.75	-219.5
SE Wall	No Wall					
SW Wall				8040.83	0.75	-223.4
NW Wall				4156.85	0.75	-115.5
Add Approaches at Cumberland Road Intersection						
North Approach				1555	0.75	43.2
South Approach				1636	0.75	45.4
297+25 "A", Lt.				8004	0.75	222.3

SUBTOTAL (THIS PAGE) = 1963.9

TOTAL = 15506.1

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/17/12</u>	Checked By: <u>ATW</u>
303-01180	COMPACTED AGGREGATE, NO. 53	2,079 TON

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/17/12</u>	Checked By: <u>ATW</u> <u>11/25/12</u>	
303-01180	COMPACTED AGGREGATE, NO. 53	2,079 TON

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/17/12</u>	Checked By: <u>ATW</u>
303-01180	COMPACTED AGGREGATE, NO. 53	2,079 TON

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/17/12</u>	Checked By: <u>ATW</u> <u>11/25/12</u>	
303-01180	COMPACTED AGGREGATE, NO. 53	2,079 TON

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/17/12</u>	Checked By: <u>ATW</u>
303-01180	COMPACTED AGGREGATE, NO. 53	2,079 TON

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/17/12</u>	Checked By: <u>ATW</u>
303-01180	COMPACTED AGGREGATE, NO. 53	2,079 TON

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/17/12</u>	Checked By: <u>ATW</u>
303-01180	COMPACTED AGGREGATE, NO. 53	2,079 TON

<i>Begin Station</i>	<i>End Station</i>		<i>Area (sft)</i>	<i>Volume</i>	<i>Factor</i>	<i>Tons</i>
				(cys)	(T/cys)	
Line "A"						
293+28.79	299+25.38	Rt	5.4	119.32	2.000	238.64
312+60.85	315+57.89	Rt	5.4	59.41	2.000	118.82
315+57.89	321+47.59	Rt	5.4	117.94	2.000	235.88
321+47.59	324+47.59	Rt	5.4	60.00	2.000	120.00
293+28.79	295+39.90	Lt	5.4	42.22	2.000	84.44
295+39.90	298+37.19	Lt	5.4	59.46	2.000	118.92
311+72.77	317+10.51	Lt	5.4	107.55	2.000	215.10
317+10.51	321+72.34	Lt	5.4	92.37	2.000	184.73
321+72.34	322+72.77	Lt	5.4	20.09	2.000	40.17
Ramp "S-4-A_SE"						
10+00.00	12+80.52	Rt	5.4	56.10	2.000	112.21
12+80.52	13+80.52	Rt	5.4	20.00	2.000	40.00
Ramp "S-4-A_SW"						
12+14.82	16+10.92	Lt	5.4	79.22	2.000	158.44
Ramp "S-4-A_NW"						
10+00.00	13+39.17	Lt	5.4	67.83	2.000	135.67
13+39.17	14+39.17	Lt	5.4	20.00	2.000	40.00
Ramp "S-4-A_NE"						
12+40.46	13+13.59	Rt	5.4	14.63	2.000	29.25
13+13.59	16+13.59	Rt	5.4	60.00	2.000	120.00
Ramp "S-3-A_NW"						
10+00.00	12+14.71	Lt	5.4	42.94	2.000	85.88

	<i>TOTAL =</i>	2078.1
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<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
402-10084	HMA FOR TEMPORARY PAVEMENT, B	4,524 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
402-10084	HMA FOR TEMPORARY PAVEMENT, B	4,524 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
402-10084	HMA FOR TEMPORARY PAVEMENT, B	4,524 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
402-10084	HMA FOR TEMPORARY PAVEMENT, B	4,524 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
402-10084	HMA FOR TEMPORARY PAVEMENT, B	4,524 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i> </u> Checked By: <u> <i>BWC</i> <i>11/24/12</i> </u>		
402-10084	HMA FOR TEMPORARY PAVEMENT, B	4,524 TON

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>BWS</i> <i>4/26/12</i></u> Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>		
402-10084	HMA FOR TEMPORARY PAVEMENT, B	4,524 TON

[illegible]

		SUBTOTAL (THIS PAGE) =		4523.8
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TOTAL = 4523.8

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> srs 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> srs 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> srs 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
501-06266	PROFILOGRAPH, PCCP	1 LS

[illegible]

		<i>TOTAL =</i>	<i>1.0</i>
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**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: SRS 5/15/12Checked By: ATW 11/25/12

501-06323

QC/QA-PCCP, 12 IN

52,210
SYS

<i>Begin Station</i>	<i>End Station</i>	<i>Side</i>	<i>Begin Width</i>	<i>End Width</i>	<i>Area (sft)</i>	<i>Area (sys)</i>
Line "A"						
293+28.79	299+25.38	Rt	85.50	85.50	51008.45	5667.6
299+25.38	312+60.85	Rt	45.50	45.50	60763.88	6751.5
312+60.85	315+57.89	Rt	71.50	52.00	18342.22	2038.0
315+57.89	316+29.21	Rt	52.00	52.00	3708.64	412.1
316+29.21	319+40.40	Rt	52.00	52.00	16181.88	1798.0
319+40.40	321+47.60	Rt	50.00	50.00	10360.00	1151.1
321+47.60	324+47.59	Rt	50.00	38.00	13199.56	1466.6
293+28.79	295+39.90	Lt	57.50	57.50	12138.83	1348.8
295+39.90	296+36.81	Lt	83.50	83.50	8091.98	899.1
296+36.81	296+81.62	Lt	83.50	77.50	3607.20	400.8
296+81.62	297+43.79	Lt	77.50	83.50	5004.69	556.1
297+43.79	298+37.20	Lt	83.50	83.50	7799.73	866.6
298+37.20	311+72.77	Lt	45.50	45.50	60768.44	6752.0
311+72.77	317+10.51	Lt	71.50	55.93	34262.10	3806.9
317+10.51	317+76.96	Lt	55.93	58.04	3786.65	420.7
317+76.96	321+72.34	Lt	50.00	50.00	19769.00	2196.6
321+72.34	322+72.77	Lt	50.00	38.05	4421.43	491.3
Ramp "SR32_SE"						
10+00.00	12+80.52	Rt	40.00	40.00	11220.80	1246.8
12+80.52	13+80.52	Rt	40.00	50.00	4500.00	500.0
13+80.52	14+08.55	Rt	50.00	49.53	1394.91	155.0
14+08.55	16+04.04	Rt	43.53	45.63	8714.94	968.3
Ramp "SR32_SW"						
20+00.00	21+54.06	Lt	31.60	26.76	4495.47	499.5
21+54.06	21+96.09	Lt	26.76	32.00	1234.84	137.2
21+96.09	26+10.90	Lt	38.00	38.00	15762.78	1751.4
Ramp "SR32_NW"						
40+00.00	43+39.17	Lt	26.00	26.00	8818.42	979.8
43+39.17	44+38.69	Lt	26.00	38.00	3184.64	353.8
44+38.69	44+59.33	Lt	38.00	38.00	784.32	87.1
44+59.33	44+89.87	Lt	32.00	27.45	907.80	100.9
44+89.87	46+07.08	Lt	27.45	31.32	3444.22	382.7
Ramp "SR32_NE"						
30+00.00	31+79.72	Rt	30.53	26.80	5151.67	572.4
31+79.72	32+21.47	Rt	26.80	32.00	1227.45	136.4
32+21.47	33+13.58	Rt	38.00	38.00	3500.18	388.9
33+13.58	36+13.58	Rt	38.00	26.01	9601.50	1066.8
Roundabout						
outside area	subtract inside area					
90846.82	15540.33				73543.08	8171.5
	1763.41					

SUBTOTAL (THIS PAGE) = 54522.4

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> SRS 5/15/12 </u>	Checked By: <u> ATW 11/25/12 </u>	
501-06323 QC/QA-PCCP, 12 IN SYS		

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>5/15/12</u>	Checked By: <u>ATW</u> <u>11/25/12</u>
501-06323	QC/QA-PCCP, 12 IN	SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>5/15/12</u>	Checked By: <u>ATW</u> <u>11/25/12</u>
501-06323	QC/QA-PCCP, 12 IN	SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>5/15/12</u>	Checked By: <u>ATW</u>
501-06323	QC/QA-PCCP, 12 IN	SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>5/15/12</u>	Checked By: <u>ATW</u>
501-06323	QC/QA-PCCP, 12 IN	SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>5/15/12</u>	Checked By: <u>ATW</u> <u>11/25/12</u>
501-06323	QC/QA-PCCP, 12 IN	SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>5/15/12</u>	Checked By: <u>ATW</u> <u>11/25/12</u>
501-06323	QC/QA-PCCP, 12 IN	SYS

[illegible]

SUBTOTAL (THIS PAGE) = -2312.5

TOTAL =		52209.9
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> ATW 11/25/12 </u>	
503-05240	D-1 CONTRACTION JOINT	26,105 LFT

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> ATW 11/25/12 </u>		
503-05240	D-1 CONTRACTION JOINT	26,105 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> ATW 11/25/12 </u>	
503-05240	D-1 CONTRACTION JOINT	26,105 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> ATW 11/25/12 </u>	
503-05240	D-1 CONTRACTION JOINT	26,105 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> ATW 11/25/12 </u>	
503-05240	D-1 CONTRACTION JOINT	26,105 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> ATW 11/25/12 </u>	
503-05240	D-1 CONTRACTION JOINT	26,105 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> ATW 11/25/12 </u>	
503-05240	D-1 CONTRACTION JOINT	26,105 LFT

[illegible]

SUBTOTAL (THIS PAGE) =		26105.0
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TOTAL = 26105.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>SRS</i> <i>11/24/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/25/12</i> </u>	
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>SRS</i> <i>11/24/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/25/12</i> </u>	
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>SRS</u> <u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>	
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By:	<u>SRS 11/24/12</u>	Checked By: <u>BWS 11/25/12</u>
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>SRS</i> <i>11/24/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/25/12</i> </u>	
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>SRS</u> <u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>	
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>SRS</i> <i>11/24/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/25/12</i> </u>	
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>SRS</u> <u>11/24/12</u>	Checked By: <u>BWS</u> <u>11/25/12</u>	
601-01522	GUARDRAIL, TRANSITION TYPE TGB	2 EACH

[illegible]

TOTAL = 2.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: SRS 11/24/12

Checked By: BWS 11/25/12

601-94689

GUARDRAIL END TREATMENT, OS

2
EACH

[illegible]

TOTAL =	2.0
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: SRS 11/24/12

Checked By: BWS 11/25/12

601-99105

GUARDRAIL, W-BEAM, 6 FT 3 IN SPACING

805
LFT

[illegible]

TOTAL =	805.0
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10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
602-06729	BARRIER DELINEATOR	66 EACH

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
602-06729	BARRIER DELINEATOR	66 EACH

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
602-06729	BARRIER DELINEATOR	66 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 602-06729 BARRIER DELINEATOR 66 EACH		
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10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
602-06729	BARRIER DELINEATOR	66 EACH

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
602-06729	BARRIER DELINEATOR	66 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 602-06729 BARRIER DELINEATOR 66 EACH		
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[illegible]

SUBTOTAL (THIS PAGE) =		66.0
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TOTAL = 66.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: srs 11/19/12

Checked By: BWS 11/24/12

602-08603

CONCRETE BARRIER, 45 IN

**2,612
LFT**

[illegible]

SUBTOTAL (THIS PAGE) =		2612.0
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***TOTAL* = 2612.0**

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 11/20/12

Checked By: BWC 11/24/12

603-06040

FENCE, FARM FIELD, 47 IN

**5,738
LFT**

[illegible]

SUBTOTAL (THIS PAGE) =		5737.6
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TOTAL = 5737.6

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
604-07569	PAVERS	491
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
604-07569	PAVERS	491
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
604-07569	PAVERS	491 SYS

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
604-07569	PAVERS	491 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
604-07569	PAVERS	491
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
604-07569	PAVERS	491 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/21/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
604-07569	PAVERS	491 SYS

[illegible]

SUBTOTAL (THIS PAGE) =		490.8
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TOTAL = 490.8

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	619 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	619 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	619 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	619 LFT

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	619 LFT

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	619 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06120	CURB, CONCRETE	619 LFT

[illegible]

SUBTOTAL (THIS PAGE) =		619.0
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TOTAL = 619.0

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06140	CURB AND GUTTER, CONCRETE	3,037 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06140	CURB AND GUTTER, CONCRETE	3,037 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06140	CURB AND GUTTER, CONCRETE	3,037 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06140	CURB AND GUTTER, CONCRETE	3,037 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06140	CURB AND GUTTER, CONCRETE	3,037 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06140	CURB AND GUTTER, CONCRETE	3,037 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06140	CURB AND GUTTER, CONCRETE	3,037 LFT

[illegible]

		SUBTOTAL (THIS PAGE) =		3036.9
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TOTAL = 3036.9

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06145	CURB AND GUTTER, B, CONCRETE	846 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06145	CURB AND GUTTER, B, CONCRETE	846 LFT

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>JPS</i> <i>11/21/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
605-06145	CURB AND GUTTER, B, CONCRETE	846 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> JPS 11/21/12 </u> Checked By: <u> BWS 11/24/12 </u> 605-06145 CURB AND GUTTER, B, CONCRETE 846 LFT		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06145	CURB AND GUTTER, B, CONCRETE	846 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/21/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
605-06145	CURB AND GUTTER, B, CONCRETE	846 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> JPS 11/21/12 </u> Checked By: <u> BWS 11/24/12 </u> 605-06145 CURB AND GUTTER, B, CONCRETE 846 LFT		
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[illegible]

SUBTOTAL (THIS PAGE) =		845.7
TOTAL =		845.7

<i>TOTAL</i> =		845.7
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	346
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	346
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	346
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> </u>	Checked By: <u> <i>JPS</i> </u>	<u> <i>11/19/12</i> </u>
605-06255	CENTER CURB, D, CONCRETE	346 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	346
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	346 SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>JPS</i> <i>11/21/12</i></u>	
605-06255	CENTER CURB, D, CONCRETE	346
		SYS

[illegible]

SUBTOTAL (THIS PAGE) =		345.3
TOTAL =		345.3

<i>TOTAL</i>	=	345.3
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10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/24/12</u>	Checked By: <u>BWC</u>
610-08516	PCCP FOR APPROACHES, 12 IN	1,303
		SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/24/12</u>	Checked By: <u>BWC</u>
610-08516	PCCP FOR APPROACHES, 12 IN	1,303
		SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/24/12</u>	Checked By: <u>BWC</u>
610-08516	PCCP FOR APPROACHES, 12 IN	1,303
		SYS

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/24/12 </u>	Checked By: <u> BWC 11/25/12 </u>	
610-08516	PCCP FOR APPROACHES, 12 IN	1,303 SYS

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/24/12 </u>	Checked By: <u> BWC 11/25/12 </u>	
610-08516	PCCP FOR APPROACHES, 12 IN	1,303 SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> BWS 11/24/12 </u>	Checked By: <u> BWC 11/25/12 </u>	
610-08516	PCCP FOR APPROACHES, 12 IN	1,303 SYS

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/24/12 </u>	Checked By: <u> BWC 11/25/12 </u>	
610-08516	PCCP FOR APPROACHES, 12 IN	1,303 SYS

[illegible]

***TOTAL* =**

1302.9

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>4/4/12</u>	Checked By: <u>BWS</u>
610-09108	PCCP FOR APPROACHES, 9 IN	60
		SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>4/4/12</u>	Checked By: <u>BWS</u>
610-09108	PCCP FOR APPROACHES, 9 IN	60
		SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>4/4/12</u>	Checked By: <u>BWS</u>
610-09108	PCCP FOR APPROACHES, 9 IN	60
		SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>4/4/12</u>	Checked By: <u>BWS</u>
610-09108	PCCP FOR APPROACHES, 9 IN	60
		SYS

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: <u>SRS</u> <u>4/4/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
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610-09108	PCCP FOR APPROACHES, 9 IN	60 SYS
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10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>4/4/12</u>	Checked By: <u>BWS</u>
610-09108	PCCP FOR APPROACHES, 9 IN	60
		SYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>SRS</u>	<u>4/4/12</u>	Checked By: <u>BWS</u>
610-09108	PCCP FOR APPROACHES, 9 IN	60
		SYS

[illegible]

TOTAL = 59.0

TOTAL = 59.0

10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: BWS 11/20/12Checked By: BWC 11/24/12

615-06510

MONUMENT, C

5
EACH

Alignment	Station	Description	Inside Pavement?			Each
Line "S-4-A"						
	10+98.00	Begin Project		Yes		
	15+72.04	PC		Yes		
	16+24.16	PI		Yes		
	16+76.27	PT		Yes		
	21+25.98	End Project		Yes		
Line "A"						
	293+28.79	Begin Project		Yes		
	300+61.42	PT		Yes		
	305+49.19	Int		Yes		
	315+00.00	Between Int and EP		Yes		
	324+47.59	End Project		No		1
SW Ramp						
	20+00.00	Begin Project, PC		Yes		
	21+09.69	PI		No		1
	21+96.09	PT		Yes		
	23+83.56	PC		Yes		
	24+97.26	PI		Yes		
	26+10.90	End Project		Yes		
NW Ramp						
	40+00.00	Begin Project		Yes		
	44+59.33	PC		Yes		
	45+36.76	PI		No		1
	46+07.08	End Project, PT		Yes		
NE Ramp						
	30+00.00	Begin Project, PC		Yes		
	31+16.06	PI		No		1
	32+21.47	PT		Yes		
	36+13.58	End Project		Yes		
SE Ramp						
	10+00.00	Begin Project		Yes		
	10+67.08	PI		Yes		
	11+34.14	PT		Yes		
	14+08.55	PC		Yes		
	15+09.91	PI		No		1
	16+04.04	End Project, PT		Yes		

SUBTOTAL (THIS PAGE) = 5.0

TOTAL = 5.0

10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: BWS 11/20/12Checked By: BWC 11/24/12

615-06515

MONUMENT, D

25
EACH

Alignment	Station	Description	Inside Pavement?			Each
Line "S-4-A"						
	10+98.00	Begin Project		Yes		1
	15+72.04	PC		Yes		1
	16+24.16	PI		Yes		1
	16+76.27	PT		Yes		1
	21+25.98	End Project		Yes		1
Line "A"						
	293+28.79	Begin Project		Yes		1
	300+61.42	PT		Yes		1
	305+49.19	Int		Yes		1
	315+00.00	Between Int and EP		Yes		1
	324+47.59	End Project		No		
SW Ramp						
	20+00.00	Begin Project, PC		Yes		1
	21+09.69	PI		No		
	21+96.09	PT		Yes		1
	23+83.56	PC		Yes		1
	24+97.26	PI		Yes		1
	26+10.90	End Project		Yes		1
NW Ramp	40+00.00	Begin Project		Yes		1
	44+59.33	PC		Yes		1
	45+36.76	PI		No		
	46+07.08	End Project, PT		Yes		1
NE Ramp	30+00.00	Begin Project, PC		Yes		1
	31+16.06	PI		No		
	32+21.47	PT		Yes		1
	36+13.58	End Project		Yes		1
SE Ramp	10+00.00	Begin Project		Yes		1
	10+67.08	PI		Yes		1
	11+34.14	PT		Yes		1
	14+08.55	PC		Yes		1
	15+09.91	PI		No		
	16+04.04	End Project, PT		Yes		1

SUBTOTAL (THIS PAGE) = 25.0

TOTAL = 25.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>DJZ</i> </u>	<u> 4/25/12 </u>	Checked By: <u> <i>BWS</i> </u>
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>DJZ</i> </u>	<u> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>DJZ</i> <i>4/25/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>DJZ</i> <i>4/25/12</i></u> Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>		
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> <i>DJZ</i> <i>4/25/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4 EACH

[illegible]

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06545	FERTILIZER	4 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06545	FERTILIZER	4 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-06545	FERTILIZER	4 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-06545	FERTILIZER	4 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06545	FERTILIZER	4 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06545	FERTILIZER	4 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-06545	FERTILIZER	4 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-06545	FERTILIZER	4 TON

[illegible]

TOTAL = 4.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-06554	SEED MIXTURE, U	1,144 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,144 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,144 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,144 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,144 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,144 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
621-06554	SEED MIXTURE, U	1,144 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06554	SEED MIXTURE, U	1,144 LBS

[illegible]

<i>TOTAL =</i>	<i>1143.2</i>
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06557	SEED MIXTURE, T	505 LBS

[illegible]

	TOTAL =	504.3
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06565	MULCHING MATERIAL	21 TON

[illegible]

	<i>TOTAL</i> =	20.2
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: DJZ 4/25/12

Checked By: BWS 11/24/12

621-06567

WATER

12
kGAL

[illegible]

<i>TOTAL</i> =	11.5
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/25/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
621-06574	SODDING	2,878
		SYS

[illegible]

	<i>TOTAL =</i>	2877.2
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> DJZ 4/17/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> </u>	<u> <i>4/17/12</i> </u>	Checked By: <u> <i>BWS</i> </u>
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
628-08520	CELLULAR TELEPHONE/RADIO	2 EACH

[illegible]

SUBTOTAL (THIS PAGE) =		2.0
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TOTAL = 2.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: DJZ 4/17/12

Checked By: BWS 11/24/12

628-08521

CELLULAR TELEPHONE/RADIO SERVICE

36
MOS

[illegible]

SUBTOTAL (THIS PAGE) = 36.0

TOTAL = 36.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: DJZ 4/17/12

Checked By: BWS 11/24/12

628-09403

FIELD OFFICE, C

18
MOS

[illegible]

SUBTOTAL (THIS PAGE) = 18.0

TOTAL = 18.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 4/26/12

Checked By: BWC 11/24/12

701-90386

TEMPORARY SHEET PILING

1
LS

[illegible]

<i>TOTAL</i> =	<i>1.0</i>
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: srs 11/19/12

Checked By: BWS 11/24/12

706-08496

REINFORCED CONCRETE MOMENT SLAB, 12 IN

2,234
SYS

[illegible]

SUBTOTAL (THIS PAGE) =		2233.3
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TOTAL = 2233.3

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	559 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
706-09545	COARSE AGGREGATE, NO 8	559 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	559 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	559 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	559 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	559 CYS

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>srs</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
706-09545	COARSE AGGREGATE, NO 8	559 CYS

[illegible]

SUBTOTAL (THIS PAGE) =		558.3
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TOTAL = 558.3

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/24/12 </u>	Checked By: <u> BWS 11/25/12 </u>	
706-09959	RAILING, CONCRETE, FT	6,361 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/24/12 </u>	Checked By: <u> BWS 11/25/12 </u>	
706-09959	RAILING, CONCRETE, FT	6,361 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/24/12 </u>	Checked By: <u> BWS 11/25/12 </u>	
706-09959	RAILING, CONCRETE, FT	6,361 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/24/12 </u>	Checked By: <u> BWS 11/25/12 </u>	
706-09959	RAILING, CONCRETE, FT	6,361 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/24/12 </u>	Checked By: <u> BWS 11/25/12 </u>	
706-09959	RAILING, CONCRETE, FT	6,361 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/24/12 </u>	Checked By: <u> BWS 11/25/12 </u>	
706-09959	RAILING, CONCRETE, FT	6,361 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/24/12 </u>	Checked By: <u> BWS 11/25/12 </u>	
706-09959	RAILING, CONCRETE, FT	6,361 LFT

[illegible]

SUBTOTAL (THIS PAGE) =		6360.2
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TOTAL = 6360.2

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	14,354 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	14,354 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	14,354 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	14,354 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	14,354 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	14,354 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	14,354 LFT

[illegible]

	<i>TOTAL</i> =	14353.8
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 715-05053 PIPE, UNDERDRAIN, OUTLET 6 IN 324 LFT		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 715-05053 PIPE, UNDERDRAIN, OUTLET 6 IN 324 LFT		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 715-05053 PIPE, UNDERDRAIN, OUTLET 6 IN 324 LFT		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 715-05053 PIPE, UNDERDRAIN, OUTLET 6 IN 324 LFT		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 715-05053 PIPE, UNDERDRAIN, OUTLET 6 IN 324 LFT		
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10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
715-05053	PIPE, UNDERDRAIN, OUTLET 6 IN	324 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> srs 11/19/12 </u> Checked By: <u> BWS 11/24/12 </u> 715-05053 PIPE, UNDERDRAIN, OUTLET 6 IN 324 LFT		
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[illegible]

TOTAL =		324.0
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10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: BWS 11/19/12Checked By: BWC 11/24/12

715-05149

PIPE, TYPE 2 CIRCULAR 12 IN

**5,593
LFT**

Station						Lft
Use 300' inlet spacing						
Line "A"	Median Inlets					
						80
						92
						38
						296
						296
						296
						246
						246
						296
						296
						296
						38
Line "A"	Outside Wall Inlets					
	Rt					54
	Lt					54
	Rt					66
	Lt					54
	Rt					38
	Lt					38
	Rt					38
	Lt					38
	Rt					66
	Lt					66
	Rt					54
	Lt					66
Line "S-4-A"						
10+50.00						157
11+50.00						182
12+70.00						151
13+50.00						173
14+50.00						556
18+50.00						651
19+50.00						172
20+50.00						167
21+50.00						167
22+50.00						67

SUBTOTAL (THIS PAGE) = 5592.4

TOTAL = 5592.4

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>11/19/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
715-09064	VIDEO INSPECTION FOR PIPE	5,593 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
715-09064	VIDEO INSPECTION FOR PIPE	5,593 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>11/19/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
715-09064	VIDEO INSPECTION FOR PIPE	5,593 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
715-09064	VIDEO INSPECTION FOR PIPE	5,593 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
715-09064	VIDEO INSPECTION FOR PIPE	5,593 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
715-09064	VIDEO INSPECTION FOR PIPE	5,593 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
715-09064	VIDEO INSPECTION FOR PIPE	5,593 LFT

[illegible]

SUBTOTAL (THIS PAGE) =		5593.0
TOTAL =		5593.0

TOTAL = ***5593.0***

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06528	OUTLET PROTECTOR, 1	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06528	OUTLET PROTECTOR, 1	12 EACH

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-06528	OUTLET PROTECTOR, 1	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06528	OUTLET PROTECTOR, 1	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06528	OUTLET PROTECTOR, 1	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
718-06528	OUTLET PROTECTOR, 1	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
718-06528	OUTLET PROTECTOR, 1	12 EACH

<i>TOTAL =</i>		<i>12.0</i>
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10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>srs</u>	<u>11/19/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
718-06532	VIDEO INSPECTION FOR UNDERDRAINS	3,000 LFT

	<i>TOTAL =</i>	<i>3000.0</i>
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<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,292 CYS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,292 CYS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>srs</i> <i>11/19/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,292 CYS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>srs</i> </u>	Checked By: <u> <i>BWS</i> </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,292 CYS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>srs</i> </u>	Checked By: <u> <i>BWS</i> </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,292 CYS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> srs 11/19/12 </u>	Checked By: <u> BWS 11/24/12 </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,292 CYS

<i>10-703</i>		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>srs</i> </u>	Checked By: <u> <i>BWS</i> </u>	
718-52610	AGGREGATE FOR UNDERDRAINS	1,292 CYS

TOTAL =		1291.9
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<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-99153	GEOTEXTILES FOR UNDERDRAIN	
		9,836 SYS

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-99153	GEOTEXTILES FOR UNDERDRAIN	9,836 SYS

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-99153	GEOTEXTILES FOR UNDERDRAIN	9,836 SYS

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-99153	GEOTEXTILES FOR UNDERDRAIN	9,836 SYS

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-99153	GEOTEXTILES FOR UNDERDRAIN	9,836 SYS

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-99153	GEOTEXTILES FOR UNDERDRAIN	9,836 SYS

<i>10-703</i> <i>SR 37 MOBILITY STUDY</i> <i>SR 32/SR 38</i> By: <u> <i>srs</i> <i>11/19/12</i> </u> Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>		
718-99153	GEOTEXTILES FOR UNDERDRAIN	9,836 SYS

<i>TOTAL =</i>		<i>9835.1</i>
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 5/11/12

Checked By: BWC 11/24/12

720-07300

INLET, TYPE H, WITH SLOTTED DRAIN

12 EACH

SUBTOTAL (THIS PAGE) = 12.0

TOTAL = 12.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 5/11/12

Checked By: BWC 11/24/12

720-07302

INLET, TYPE HA, WITH SLOTTED DRAIN

12
EACH

SUBTOTAL (THIS PAGE) = 12.0

TOTAL = 12.0

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>BWS</u> <u>11/19/12</u> Checked By: <u>BWC</u> <u>11/24/12</u> 720-45410 MANHOLE, C4 12 EACH		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-45410	MANHOLE, C4	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>BWS</u> <u>11/19/12</u> Checked By: <u>BWC</u> <u>11/24/12</u> 720-45410 MANHOLE, C4 12 EACH		
--	--	--

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-45410	MANHOLE, C4	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-45410	MANHOLE, C4	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-45410	MANHOLE, C4	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-45410	MANHOLE, C4	12 EACH

[illegible]

		SUBTOTAL (THIS PAGE) =		12.0
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TOTAL = 12.0

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98174	INLET, B15	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-98174	INLET, B15	12 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98174	INLET, B15	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98174	INLET, B15	12 EACH

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98174	INLET, B15	12
		EACH

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-98174	INLET, B15	12 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 11/19/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
720-98174	INLET, B15	12 EACH

SUBTOTAL (THIS PAGE) =		12.0
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TOTAL = 12.0

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98555	INLET, C15	12 EACH

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98555	INLET, C15	12
		EACH

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98555	INLET, C15	12
		EACH

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98555	INLET, C15	12
		EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>11/19/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
720-98555	INLET, C15	12 EACH

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98555	INLET, C15	12
		EACH

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>11/19/12</u>	Checked By: <u>BWC</u>
720-98555	INLET, C15	12
		EACH

SUBTOTAL (THIS PAGE) =		12.0
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TOTAL = 12.0

10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: SRS 11/24/12Checked By: srp 11/26/12

731-93945

FACE PANELS, CONCRETE

57,288
SFT

Segment	Length	Begin Height	End Height			
	(ft)	(ft)	(ft)			
Since the wall is curved and extends between two alignments (mainline and ramp), all lengths measured in AutoCAD for better accuracy. Segments measured in the direction of travel. Not every wall has all 3 segments. Assumptions made on lengths depending on what the wall looks like. * = measured directly in AutoCAD.						
Segment 1 = Transition from 4 ft to 7 ft						
Segment 2 = 7 ft (around curve)						
Segment 3 = Transition from 7 ft to 4 ft						
NE Wall	488.73					
Segment 1	244.37	4	11			1833
Segment 2	244.37	11	11			2688
Segment 3	--	--	--			
SE Wall						
No wall						
SW Wall	594.29					
Segment 1	74.29	4	11			557
Segment 2	222.86	11	11			2451
Segment 3*	297.15	11	4			2229
NW Wall	240.01					
Segment 1	--	--	--			
Segment 2	240.01	11	11			2640
Segment 3	--	--	--			
INSIDE WALL AREAS COPIED FROM STRUCTURE BACKFILL AREAS (211-09226)						
NB Wall						
299+25.39	305+15.80	4	27			9145
305+15.80	306+69.90	27	27			4161
306+69.90	312+60.85	27	4			9154
SB Wall						
298+37.20	304+29.35	4	27			9178
304+29.35	305+80.17	27	27			4072
305+80.17	311+72.77	27	4			9179

TOTAL = 57287.8

10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: SRS 11/24/12Checked By: srp 11/26/12**731-93946****WALL ERECTION****57,288
SFT**

Segment	Length	Begin Height	End Height			
	(ft)	(ft)	(ft)			
Since the wall is curved and extends between two alignments (mainline and ramp), all lengths measured in AutoCAD for better accuracy. Segments measured in the direction of travel. Not every wall has all 3 segments. Assumptions made on lengths depending on what the wall looks like. * = measured directly in AutoCAD.						
Segment 1 = Transition from 4 ft to 7 ft						
Segment 2 = 7 ft (around curve)						
Segment 3 = Transition from 7 ft to 4 ft						
NE Wall	488.73					
Segment 1	244.37	4	11			1833
Segment 2	244.37	11	11			2688
Segment 3	--	--	--			
SE Wall						
No wall						
SW Wall	594.29					
Segment 1	74.29	4	11			557
Segment 2	222.86	11	11			2451
Segment 3*	297.15	11	4			2229
NW Wall	240.01					
Segment 1	--	--	--			
Segment 2	240.01	11	11			2640
Segment 3	--	--	--			
INSIDE WALL AREAS COPIED FROM STRUCTURE BACKFILL AREAS (211-09226)						
NB Wall						
299+25.39	305+15.80	4	27			9145
305+15.80	306+69.90	27	27			4161
306+69.90	312+60.85	27	4			9154
SB Wall						
298+37.20	304+29.35	4	27			9178
304+29.35	305+80.17	27	27			4072
305+80.17	311+72.77	27	4			9179

TOTAL = 57287.8

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: SRS 11/24/12

Checked By: srp 11/26/12

731-93947

LEVELING PAD, CONCRETE

**3,995
LFT**

SUBTOTAL (THIS PAGE) =		3994.1
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***TOTAL* = 3994.1**

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-01093	TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY	4 EACH

SUBTOTAL (THIS PAGE) =		4.0
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TOTAL = 4.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-03290

CONSTRUCTION SIGN, C

2
EACH

SUBTOTAL (THIS PAGE) =		2.0
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TOTAL = 2.0

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-04308	ROAD CLOSURE SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-04308	ROAD CLOSURE SIGN ASSEMBLY	4 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<u> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> </u>
801-04308	ROAD CLOSURE SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-04308	ROAD CLOSURE SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-04308	ROAD CLOSURE SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-04308	ROAD CLOSURE SIGN ASSEMBLY	4 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-04308	ROAD CLOSURE SIGN ASSEMBLY	4 EACH

SUBTOTAL (THIS PAGE) =		4.0
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TOTAL = 4.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<i>4/26/12</i>	Checked By: <u> <i>BWC</i> </u>
<i>801-06625</i>	DETOUR ROUTE MARKER ASSEMBLY	18 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<i>4/26/12</i>	Checked By: <u> <i>BWC</i> </u>
<i>801-06625</i>	DETOUR ROUTE MARKER ASSEMBLY	18 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<u> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> </u>
801-06625	DETOUR ROUTE MARKER ASSEMBLY	18 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<u> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> </u>
801-06625	DETOUR ROUTE MARKER ASSEMBLY	18 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<u> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> </u>
801-06625	DETOUR ROUTE MARKER ASSEMBLY	18 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<u> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> </u>
801-06625	DETOUR ROUTE MARKER ASSEMBLY	18 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> </u>	<u> <i>4/26/12</i> </u>	Checked By: <u> <i>BWC</i> </u>
801-06625	DETOUR ROUTE MARKER ASSEMBLY	18 EACH

SUBTOTAL (THIS PAGE) =		18.0
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TOTAL = 18.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-06640

CONSTRUCTION SIGN, A

24
EACH

SUBTOTAL (THIS PAGE) = 24.0

TOTAL = 24.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-06645

CONSTRUCTION SIGN, B

4
EACH

Description						Each
Assumptions: Used MOT Plan for 126th and Keystone as example MOT Plan.						
MOT Phase I						
Begin Project						2
Midde of project						0
End Project						2
					Total =	4
MOT Phase II						
Begin Project						2
Midde of project						0
End Project						2
					Total =	4
MOT Phase III						
Begin Project						3
Midde of project						1
End Project						0
					Total =	4
MOT Phase IV						
Begin Project						2
Midde of project						0
End Project						0
					Total =	2
MOT Phase V						
Begin Project						0
Midde of project						0
End Project						0
					Total =	0
					Highest Total =	4

SUBTOTAL (THIS PAGE) = 4.0

TOTAL = 4.0

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> BWS 4/26/12 </u> Checked By: <u> BWC 11/24/12 </u> 801-06710 FLASHING ARROW SIGN 510 DAY		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> BWS 4/26/12 </u> Checked By: <u> BWC 11/24/12 </u> 801-06710 FLASHING ARROW SIGN 510 DAY		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> BWS 4/26/12 </u> Checked By: <u> BWC 11/24/12 </u> 801-06710 FLASHING ARROW SIGN 510 DAY		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> BWS 4/26/12 </u> Checked By: <u> BWC 11/24/12 </u> 801-06710 FLASHING ARROW SIGN 510 DAY		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>BWS</u> <u>4/26/12</u> Checked By: <u>BWC</u> <u>11/24/12</u> 801-06710 FLASHING ARROW SIGN 510 DAY		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> BWS 4/26/12 </u> Checked By: <u> BWC 11/24/12 </u> 801-06710 FLASHING ARROW SIGN 510 DAY		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u> BWS 4/26/12 </u> Checked By: <u> BWC 11/24/12 </u> 801-06710 FLASHING ARROW SIGN 510 DAY		
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[illegible]

SUBTOTAL (THIS PAGE) =		510.0
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TOTAL = 510.0

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/25/12 </u>	
801-06775	MAINTAINING TRAFFIC	1 LS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/26/12</u>	Checked By: <u>BWC</u>
801-06775	MAINTAINING TRAFFIC	1 LS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/26/12</u>	Checked By: <u>BWC</u>
801-06775	MAINTAINING TRAFFIC	1 LS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/26/12</u>	Checked By: <u>BWC</u>
801-06775	MAINTAINING TRAFFIC	1 LS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/26/12</u>	Checked By: <u>BWC</u>
801-06775	MAINTAINING TRAFFIC	1 LS

10-703		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u>BWS</u>	<u>4/26/12</u>	Checked By: <u>BWC</u>
801-06775	MAINTAINING TRAFFIC	1 LS

10-703		
SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/25/12 </u>	
801-06775	MAINTAINING TRAFFIC	1 LS

[illegible]

SUBTOTAL (THIS PAGE) =		1.0
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TOTAL = 1.0

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07024	ENERGY ABSORBING TERMINAL, CZ, TL-3	1 EACH

[illegible]

SUBTOTAL (THIS PAGE) =		1.0
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TOTAL = 1.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-07118

BARRICADE, III-A

228

LFT

[illegible]

SUBTOTAL (THIS PAGE) = 228.0

***TOTAL* = 228.0**

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07119	BARRICADE, III-B	48 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-07119	BARRICADE, III-B	48 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-07119	BARRICADE, III-B	48 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-07119	BARRICADE, III-B	48 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07119	BARRICADE, III-B	48 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07119	BARRICADE, III-B	48 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>BWS</i> <i>4/26/12</i></u>	Checked By: <u> <i>BWC</i> <i>11/24/12</i></u>	
801-07119	BARRICADE, III-B	48
		LFT

[illegible]

SUBTOTAL (THIS PAGE) =		48.0
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TOTAL = 48.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-08400

TEMPORARY TRAFFIC BARRIER, TYPE 1

**3,300
LFT**

[illegible]

SUBTOTAL (THIS PAGE) =		3300.0
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***TOTAL* = 3300.0**

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08507	TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED	296 LFT

[illegible]

SUBTOTAL (THIS PAGE) =		296.0
TOTAL =		296.0

TOTAL =		296.0
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08508	TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED	3,300 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08508	TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED	3,300 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08508	TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED	3,300 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08508	TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED	3,300 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>BWS</u> <u>4/26/12</u>	Checked By: <u>BWC</u> <u>11/24/12</u>	
801-08508	TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED	3,300 LFT

[illegible]

SUBTOTAL (THIS PAGE) =		3300.0
TOTAL =		3300.0

<i>TOTAL</i> =		3300.0
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>BWS</u> <u>4/26/12</u> Checked By: <u>BWC</u> <u>11/24/12</u> 801-09133 TEMPORARY CHANGEABLE MESSAGE SIGN 2 EACH		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>BWS</u> <u>4/26/12</u> Checked By: <u>BWC</u> <u>11/24/12</u> 801-09133 TEMPORARY CHANGEABLE MESSAGE SIGN 2 EACH		
---	--	--

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-09133	TEMPORARY CHANGEABLE MESSAGE SIGN	2 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>BWS</u> <u>4/26/12</u> Checked By: <u>BWC</u> <u>11/24/12</u> 801-09133 TEMPORARY CHANGEABLE MESSAGE SIGN 2 EACH		
---	--	--

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-09133	TEMPORARY CHANGEABLE MESSAGE SIGN	2 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-09133	TEMPORARY CHANGEABLE MESSAGE SIGN	2 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> BWS 4/26/12 </u>	Checked By: <u> BWC 11/24/12 </u>	
801-09133	TEMPORARY CHANGEABLE MESSAGE SIGN	2 EACH

[illegible]

SUBTOTAL (THIS PAGE) =		2.0
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TOTAL = 2.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: BWS 4/26/12

Checked By: BWC 11/24/12

801-52817

TEMPORARY CROSSOVER, B

2
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 2.0

TOTAL = 2.0

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/28/12 </u>	Checked By: <u> BWC 12/19/12 </u>	
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/28/12 </u>	Checked By: <u> BWC 12/19/12 </u>	
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/28/12 </u>	Checked By: <u> BWC 12/19/12 </u>	
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/28/12 </u>	Checked By: <u> BWC 12/19/12 </u>	
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/28/12 </u>	Checked By: <u> BWC 12/19/12 </u>	
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> JPS 11/28/12 </u>	Checked By: <u> BWC 12/19/12 </u>	
802-05701	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	340 LFT

[illegible]

				SUBTOTAL (THIS PAGE) =	340.0	
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<i>TOTAL</i>	<i>=</i>	<i>340.0</i>
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<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/28/12</i></u>	Checked By: <u> <i>BWC</i> <i>12/19/12</i></u>	
802-07057	SIGN, PANEL, WITH LEGEND	429 SFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/28/12</i></u>	Checked By: <u> <i>BWC</i> <i>12/19/12</i></u>	
802-07057	SIGN, PANEL, WITH LEGEND	429 SFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/28/12</i></u>	Checked By: <u> <i>BWC</i> <i>12/19/12</i></u>	
802-07057	SIGN, PANEL, WITH LEGEND	429 SFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/28/12</i></u>	Checked By: <u> <i>BWC</i> <i>12/19/12</i></u>	
802-07057	SIGN, PANEL, WITH LEGEND	429 SFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/28/12</i></u>	Checked By: <u> <i>BWC</i> <i>12/19/12</i></u>	
802-07057	SIGN, PANEL, WITH LEGEND	429 SFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/28/12</i></u>	Checked By: <u> <i>BWC</i> <i>12/19/12</i></u>	
802-07057	SIGN, PANEL, WITH LEGEND	429 SFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>JPS</i> <i>11/28/12</i></u>	Checked By: <u> <i>BWC</i> <i>12/19/12</i></u>	
802-07057	SIGN, PANEL, WITH LEGEND	429 SFT

[illegible]

					SUBTOTAL (THIS PAGE) =	429.0
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TOTAL =	429.0
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10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: JPS 11/28/12

Checked By: BWC 12/19/12

802-07138 WIDE FLANGE SIGN POST SUPPORT FOUNDATION,
IX

2
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 2.0

***TOTAL* = 2.0**

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: JPS 11/28/12

Checked By: BWC 12/19/12

802-07159

CANTILEVER SIGN SUPPORT FOUNDATION, II

2
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 2.0

TOTAL = 2.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: JPS 11/28/12

Checked By: BWC 12/19/12

802-09840

SIGN, SHEET, WITH LEGEND 0.100 IN THICKNESS

115
SFT

[illegible]

SUBTOTAL (THIS PAGE) = 115.0

TOTAL = 115.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: JPS 11/28/12

Checked By: BWC 12/19/12

802-76095

STRUCTURAL STEEL, BREAKAWAY

681
LBS

[illegible]

SUBTOTAL (THIS PAGE) = 680.2

TOTAL = 680.2

10-703

SR 37 MOBILITY STUDY**SR 32/SR 38**

By: JPS 11/28/12

Checked By: BWC 12/19/12

802-76135

OVERHEAD SIGN STRUCTURE, CANTILEVER

SINGLE ARM

1
EACH

[illegible]

SUBTOTAL (THIS PAGE) = 1.0

TOTAL = **1.0**

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	12 EACH

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	12 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
804-06770	DELINEATOR POST	12 EACH

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	12 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
804-06770	DELINEATOR POST	12 EACH

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/17/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
804-06770	DELINEATOR POST	12 EACH

<i>10-703</i> SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u> <i>BWS</i> <i>4/17/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
804-06770	DELINEATOR POST	12 EACH

[illegible]

SUBTOTAL (THIS PAGE) = 12.0

TOTAL = 12.0

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: DJZ 5/9/12

Checked By: BWS 11/24/12

808-10031

LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN

2,513
LFT

[illegible]

TOTAL =	2512.2
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10-703

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: DJZ 5/9/12Checked By: BWS 11/24/12**808-10033****LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN****10,410
LFT**

<i>Begin Station</i>	<i>End Station</i>	<i>Begin Offset</i>	<i>End Offset</i>			<i>Length (ft)</i>
Line "A"	NB					
293+28.79	299+24.27	76.75	76.75			595
299+25.39	312+60.85	31.25	31.25			1335
312+61.28	315+57.89	64.75	43.25			297
315+57.89	321+47.59	43.25	62.10			590
321+47.59	324+47.59	62.10	50.07			300
	SB					
293+28.79	295+39.90	-43.25	-43.25			211
293+28.79	296+81.62	-76.75	-76.75			353
297+27.66	298+37.20	-76.75	-76.75			110
298+37.20	311+72.77	-31.25	-31.25			1336
311+73.01	317+10.51	-64.75	-43.25			538
317+10.51	321+72.34	-43.25	-57.63			462
321+72.34	322+72.77	-57.63	-49.28			101
Line "S-4-A"						
11+62.10	12+96.91	16.00	18.94			135
11+62.10	13+08.55	28.00	45.71			148
16+54.33	18+54.10	55.29	14.41			204
16+24.54	18+38.26	86.79	27.86			222
Round-A-Bout						
Length by AutoCAD			586.00			586
RAMPS	SE					
10+00.00	12+80.50	24.00	24.00			281
12+80.50	13+80.50	24.00	36.00			101
13+80.50	14+85.50	36.00	42.47			105
13+80.50	16+04.05	24.00	24.00			224
13+99.19	16+04.05	12.00	12.00			205
	NE					
10+00.00	12+30.99	16.00	12.00			231
11+76.35	12+40.46	26.96	24.00			64
12+40.46	13+13.59	24.00	24.00			73
13+13.59	16+13.59	24.00	12.00			300
						0
	SW					
10+00.00	12+05.47	16.00	12.00			206
11+53.92	12+14.82	26.77	24.00			61
12+14.82	16+10.91	24.00	24.00			396

SUBTOTAL (THIS PAGE) = 9768.3

10-703

SR 37 MOBILITY STUDY
SR 32/SR 38

By: DJZ 5/9/12

Checked By: _____

808-10033

LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN

LFT

[illegible]

SUBTOTAL (THIS PAGE) =		640.8
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TOTAL = 10409.1

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By:	<u>DJZ 5/9/12</u>	Checked By: <u>BWS 11/24/12</u>
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	9,366 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	9,366 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	9,366 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	9,366 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	9,366 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10034	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	9,366 LFT

[illegible]

<i>TOTAL</i>	=	9365.9
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10037	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN	4,348 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10037	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN	4,348 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10037	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN	4,348 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10037	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN	4,348 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By: <u>DJZ</u>	<u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>
808-10037	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN	4,348 LFT

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-10037	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN	4,348 LFT

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY SR 32/SR 38</i>		
By:	<u>DJZ 5/9/12</u>	Checked By: <u>BWS 11/24/12</u>
808-10037	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN	4,348 LFT

[illegible]

	TOTAL =	4347.2
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u> Checked By: <u>BWS</u> <u>11/24/12</u>		
808-75071	PAVEMENT MESSAGE MARKING, PREFORMED PLASTIC, LANE INDICATION ARROW	11 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>DJZ</u> <u>5/9/12</u> Checked By: <u>BWS</u> <u>11/24/12</u> 808-75071 PAVEMENT MESSAGE MARKING, PREFORMED PLASTIC, LANE INDICATION ARROW 11 EACH		
--	--	--

10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-75071	PAVEMENT MESSAGE MARKING, PREFORMED PLASTIC, LANE INDICATION ARROW	11 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>DJZ</u> <u>5/9/12</u> Checked By: <u>BWS</u> <u>11/24/12</u> 808-75071 PAVEMENT MESSAGE MARKING, PREFORMED PLASTIC, LANE INDICATION ARROW 11 EACH		
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10-703 SR 37 MOBILITY STUDY SR 32/SR 38		
By: <u>DJZ</u> <u>5/9/12</u>	Checked By: <u>BWS</u> <u>11/24/12</u>	
808-75071	PAVEMENT MESSAGE MARKING, PREFORMED PLASTIC, LANE INDICATION ARROW	11 EACH

10-703 SR 37 MOBILITY STUDY SR 32/SR 38 By: <u>DJZ</u> <u>5/9/12</u> Checked By: <u>BWS</u> <u>11/24/12</u> 808-75071 PAVEMENT MESSAGE MARKING, PREFORMED PLASTIC, LANE INDICATION ARROW 11 EACH		
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[illegible]

SUBTOTAL (THIS PAGE) =		11.0
TOTAL =		11.0

TOTAL = **11.0**

**SR 37 MOBILITY STUDY
SR 32/SR 38**

By: DJZ 5/10/12Checked By: BWS 11/24/12

808-75998

SNOWPLOWABLE RAISED PAVEMENT MARKER**213
EACH**

<i>Begin Station</i>	<i>End Station</i>	<i>Begin Offset</i>	<i>End Offset</i>	<i>Length</i>	<i>Spacing</i>	<i>Each</i>
Line "A"	NB					
293+28.79	316+29.65	19.25	19.25	2300.86	80	29
316+29.65	321+47.37	19.25	38.08	518.06	80	7
321+47.37	324+47.59	38.08	38.07	300.22	80	4
293+28.79	294+40.26	31.25	31.25	111.47	80	2
298+69.63	299+24.72	62.75	64.73	55.13	80	1
315+29.87	321+48.03	31.25	50.11	618.45	80	8
	SB					
293+28.79	317+77.40	-19.25	-19.25	2448.61	80	31
317+77.40	322+72.33	-19.25	-37.25	495.26	80	7
293+28.79	295+67.95	-31.25	-31.25	239.16	80	3
316+10.27	317+77.18	-31.25	-31.25	166.91	80	3
317+77.18	321+72.34	-31.25	-45.62	395.42	80	5
297+81.53	298+37.20	-64.75	-64.75	55.67	80	1
Line "S-4-A"						
11+01.20	11+62.10	12.00	16.00	61.03	80	1
11+00.60	11+62.10	24.00	28.00	61.63	80	1
18+54.10	21+28.04	14.41	12.00	273.95	80	4
18+38.26	19+26.08	27.86	24.00	87.90	80	2
18+17.59	21+28.04	-16.00	-12.00	310.48	80	4
18+17.59	18+69.91	-28.00	-28.00	52.32	80	1
<i>Round-A-Bout</i>						
<i>Lengths by AutoCAD</i>				609.20	40	16
Line "S-4-A"						
11+62.10	12+96.91	16.00	18.94	134.84	40	4
11+62.10	13+08.55	28.00	45.71	147.52	40	4
16+54.33	18+54.10	55.29	14.41	203.91	40	6
16+24.54	18+38.26	86.79	27.86	221.70	40	6
<i>Round-A-Bout</i>						
<i>Length by AutoCAD</i>				586.00	40	15
RAMPS	SE					
13+80.50	16+04.05	24.00	24.00	223.55	40	6
13+99.19	16+04.05	12.00	12.00	204.86	40	6
10+00.00	13+99.19	12.00	12.00	399.19	40	10

SUBTOTAL (THIS PAGE) = 187.0

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>DJZ</i> <i>5/10/12</i></u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i></u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>5/10/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	EACH

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>DJZ</i> <i>5/10/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	EACH

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>DJZ</i> <i>5/10/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	EACH

<i>10-703</i>		
<i>SR 37 MOBILITY STUDY</i>		
<i>SR 32/SR 38</i>		
By: <u> <i>DJZ</i> <i>5/10/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	EACH

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>DJZ</i> <i>5/10/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	EACH

<i>10-703</i>		
SR 37 MOBILITY STUDY		
SR 32/SR 38		
By: <u> <i>DJZ</i> <i>5/10/12</i> </u>	Checked By: <u> <i>BWS</i> <i>11/24/12</i> </u>	
808-75998	SNOWPLOWABLE RAISED PAVEMENT MARKER	EACH

[illegible]

SUBTOTAL (THIS PAGE) =		26.0
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TOTAL = 213.0

BRIDGE QUANTITIES

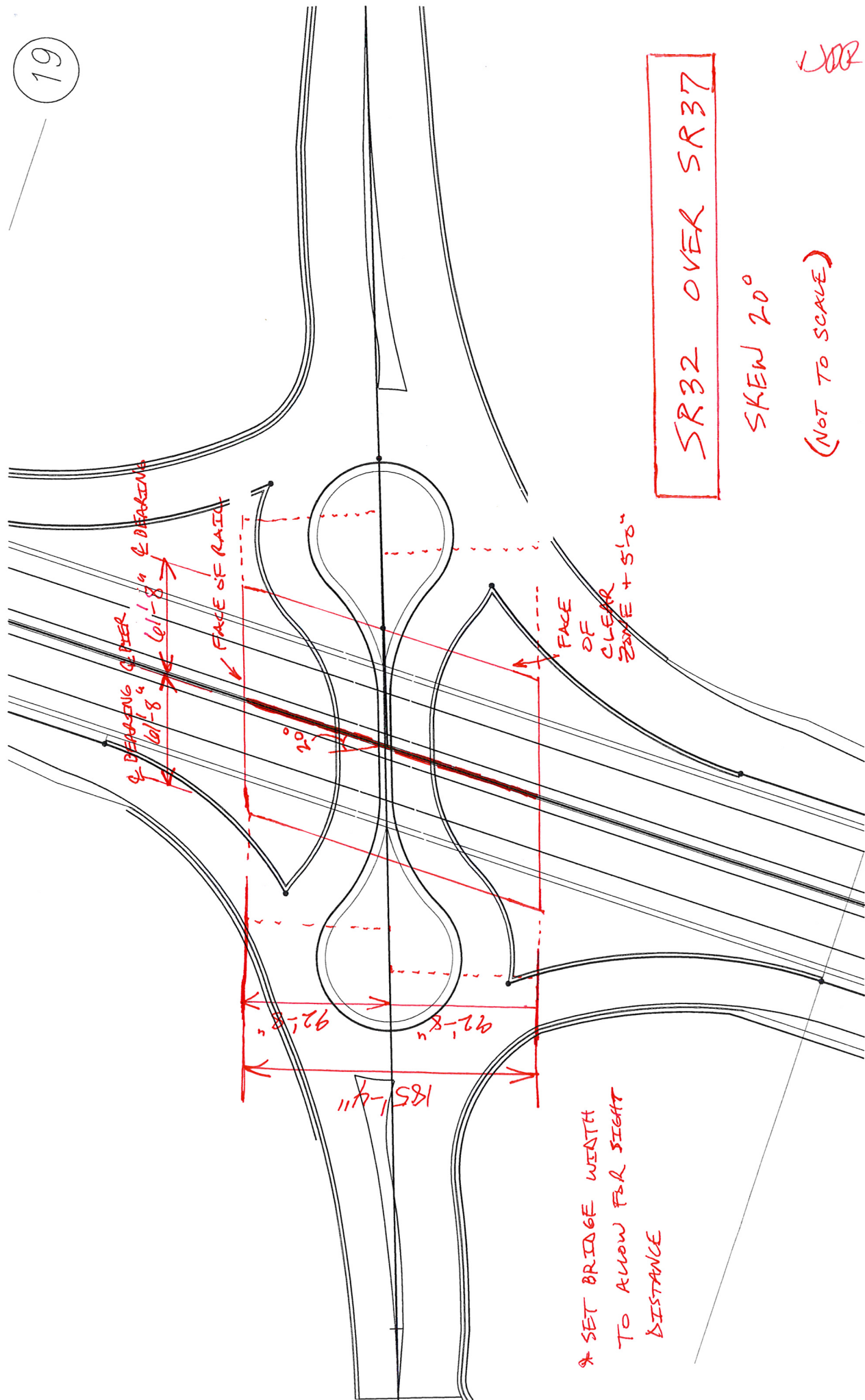
BRIDGE GEOMETRY

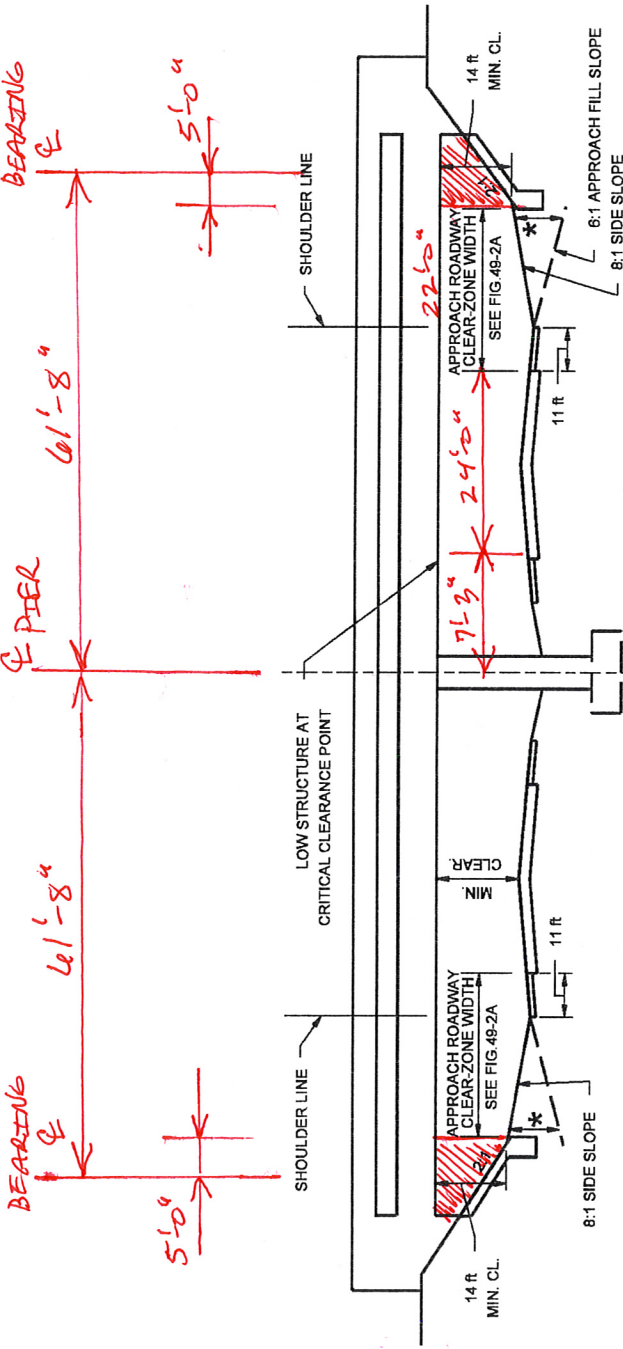
SR 32 OVER SR 37

✓ 11/14/12

SR32 OVER SR37

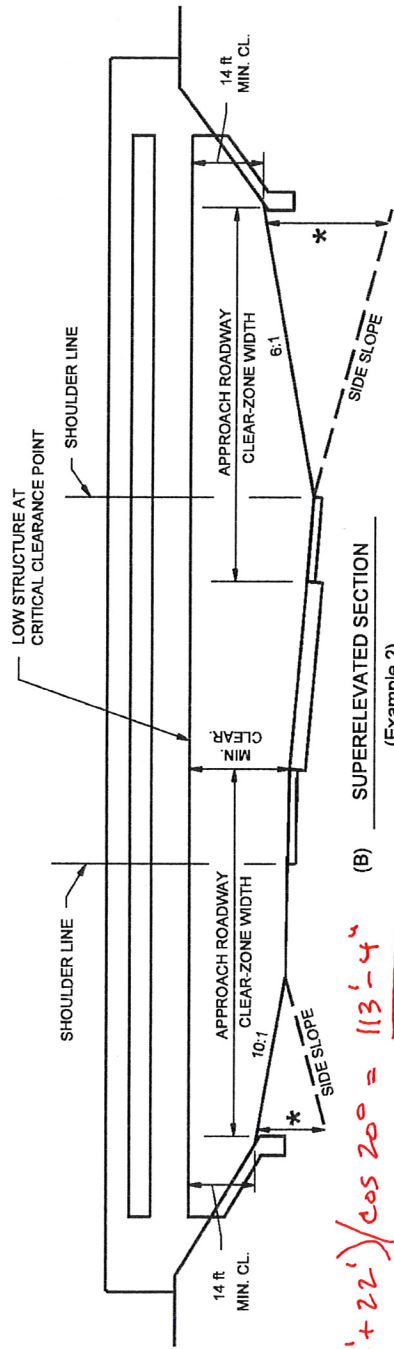
SKW 20°
(NOT TO SCALE)





(A) TANGENT SECTION
(Example 1)

* SEE SECTION 49-3.06(03) FOR SPILLSLOPE TRANSITIONS.



$$(14'-6" + 24' + 24' + 22' + 22') / \cos 20^\circ = 113'-4"$$

$$113'-4" / 2 = 56'-8" + 5'-0" = 61'-8"$$

BRIDGE PIER AND SPILLSLOPE CLEARANCE,
NEW CONSTRUCTION

Figure 49-3K

SR 32 OVER SR 37

11/14/12

SPAN = 61'-8"
Q PIER TO Q BEARING

BEAM PROPERTIES

$$A_B = 369 \text{ in.}^2$$

$$I_B = 50,979 \text{ in.}^4$$

$$S_{TB} = 2,527 \text{ in.}^3$$

$$S_{BB} = 3,221 \text{ in.}^3$$

$$Y_{TB} = 20.2 \text{ in.}$$

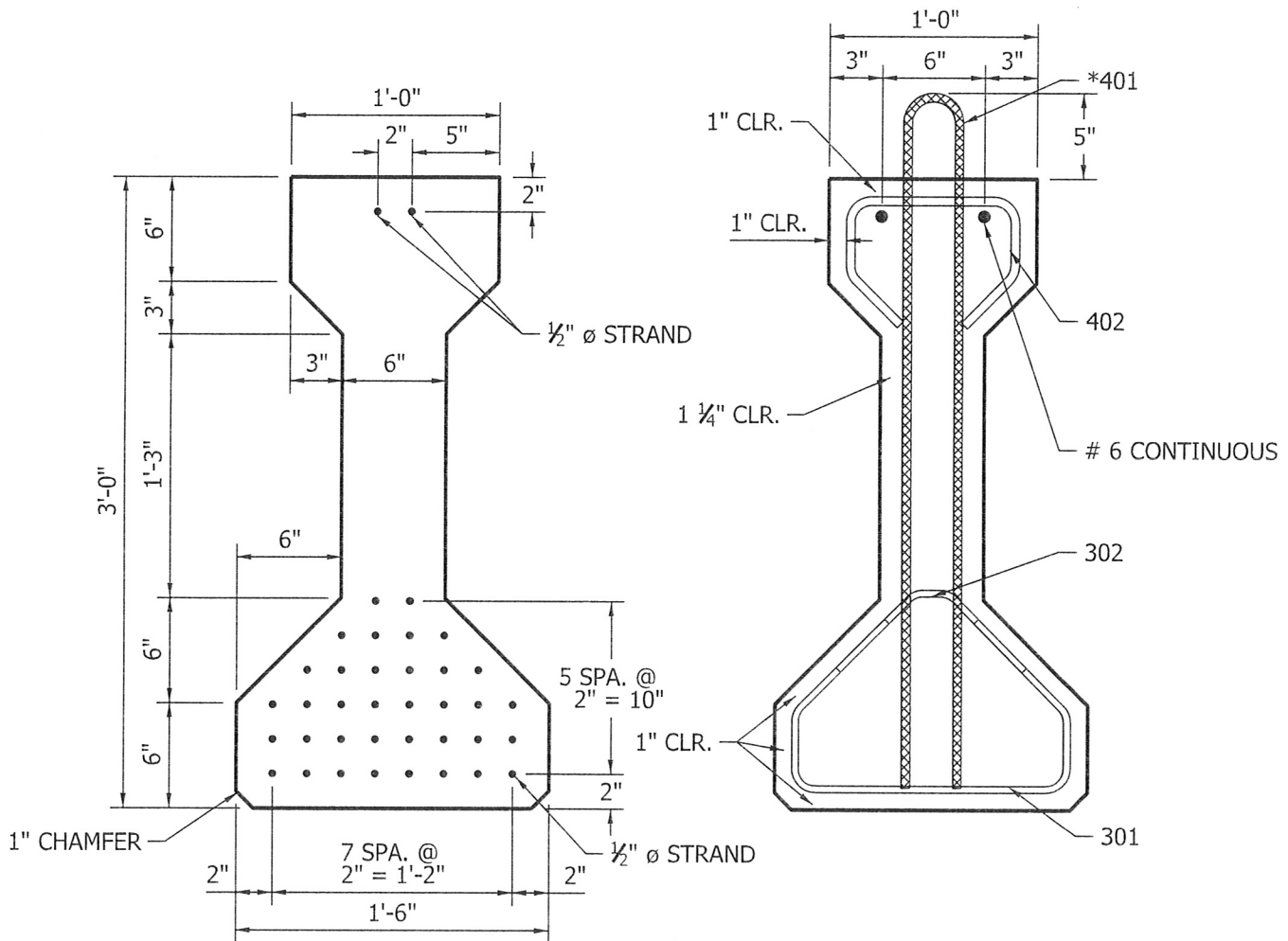
$$Y_{BB} = 15.8 \text{ in.}$$

$$\text{Wt.} = 384 \text{ lb/lf}$$

NOTES:

1. BARS 301 AND 302 COMBINED TO FORM ONE STIRRUP.

2.  *DENOTES EPOXY-COATED BAR



I - BEAM TYPE II

Figure 406-13B
(page 1 of 3)

SR32 over SR37

Des by JTB 10/24/2012

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JTB 11/14/12

Rev by

Summary of Bridge Quantities

Structure Number

INDOT Item Code	Item Description	unit	Quantity	
105-06845	CONSTRUCTION ENGINEERING	LS	3%	
110-01001	MOBILIZATION AND DEMOBILIZATION	LS	5%	
203-02020	EXCAVATION, FOUNDATION, UNCLASSIFIED	CYS	533	
211-02050	B BORROW	CYS	533	
302-07455	DENSE GRADED SUBBASE	CYS	256	
609-06259	REINFORCED CONCRETE BRIDGE APPROACH, 12 IN.	SYS	1,539	
701-06011	DYNAMIC PILE LOAD TEST	EACH	3	
701-09559	TEST PILE, DYNAMIC, RESTRIKE	EACH	3	
701-09690	TEST PILE, DYNAMIC, 14 IN NON-PRODUCTION	LFT	210	
701-08122	PILE, STEEL PIPE, 0.375", 14	LFT	5,460	
702-51005	CONCRETE,A,SUBSTRUCTURE	CYS	287	
702-51015	CONCRETE,B,FOOTINGS	CYS	197	
703-06028	REINFORCING BARS	LBS	58,980	
703-06029	REINFORCING BARS, EPOXY COATED	LBS	439,486	
704-51002	CONCRETE, C, SUPERSTRUCTURE	CYS	1,683	
706-09959	RAILING, CONCRETE, FT	LFT	250	
707-07605	STRUCTURAL MEMBERS, CONCRETE I-BEAM, II, 36 IN. X 12 IN.	LFT	2,590	
709-51821	SURFACE SEAL	SFT	28,288	estimated

SR 32 over SR37

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Proposed Structure # is _____

_____ SR32 over SR 37 _____

Design Standards =	<u>Road Over</u> 4R		<u>Under</u> 4R
Functional Classification =	Urban Arterial		Urban Arterial
ADT =	xxxx	(yr. 2030)	xxxx
Design Speed =	35	mph	55
Vertical Clearance Req'd =	16.5	feet	
Skew =	20	degrees	
Calculated C-C End Brg. Length =	123.33	feet	
USE	123.33	feet	
Span Configuration Anticipated =	1	@	61.67 feet
	1	@	61.67 feet

SR 32 over SR37

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Proposed Structure # is _____

SR32 over SR 37

Number of Spans = 2 spans

O-O Coping Width = 185.33 feet

C-C End Brg Length = 123.33 feet

Skew = 20.0000 degrees

O-O Bridge Length = 124.8 feet

Clear Roadway Width = 181.83 feet

Slab Thickness = 8 inches

Number of Piers units = 1

Number of Substructure units = 3

Twin Structure = NO

Type of Slope Wall = MSE Wall

SR 32 over SR37

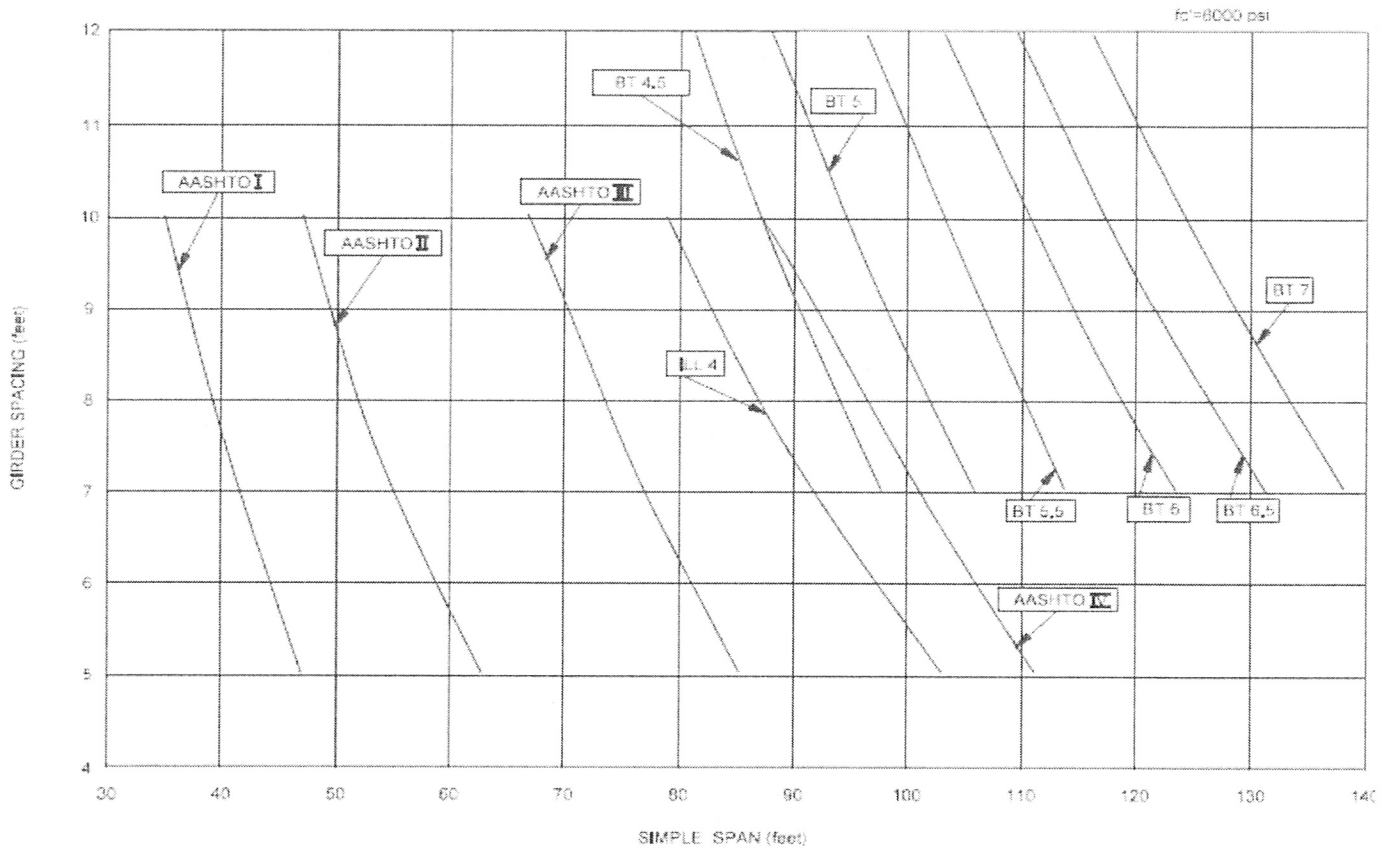
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Beam Quantities

Structure Number
SR32 over SR 37



PRESTRESSED CONCRETE I-BEAM SELECTION CHART

Figure 59-3K

Beam Type = STRUCTURAL MEMBERS, CONCRETE I-BEAM, II, 36 IN. X 12 IN.

Overhang to be = 2.665 ft
Spacing to be = 9 ft

out to out width = 185.33 ft
Beam Length = 123.33 ft
Beams Needed = 21 ft

Twin Structure = NO

Length Needed = 2,590 ft

SR 32 over SR37

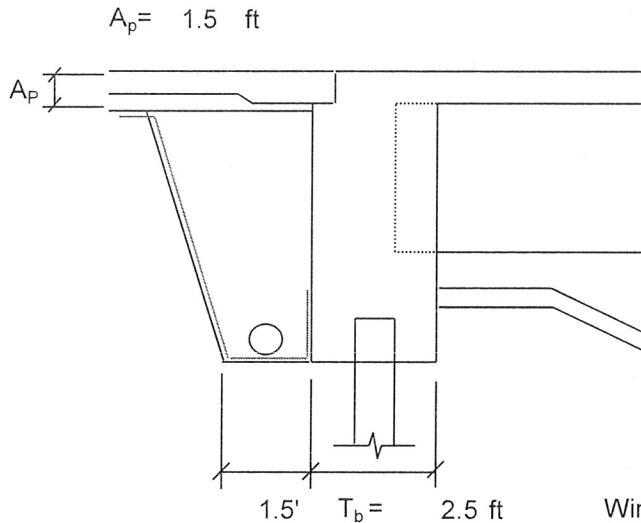
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Bent Quantities

Structure Number
SR32 over SR 37



$D_s = 0.83$ ft

$D_g = 3.00$ ft

$D_b = 1$ ft

$D_c = 3$ ft

Structure Data

Out to Out Coping 185.33 ft

Skew 20 degrees

Wingwall Thickness (W_t) 0 ft

Number of Bents (N_b) 2

Reinforcing Rates

Bent Body 145 #/CY

Wingwalls 145 #/CY

Calculated Constants

Bent Length (L_B) = O-to-O Coping / $\cos(\text{skew}) = 197.22$ ft

Total Bent Depth (D_T) = $D_s + D_g + D_b + D_c = 7.83$ ft

Wing Length (W_L) = $(D_T - D_c) * 2 + 1' = 0.00$ ft

Concrete Quantities

Class C, Superstructure

Bent Body $V_B = N_b * (T_b * (D_T - D_s) * L_B) / 27$
 $V_B = 255.7$ cubic yards

Wingwalls $V_W = N_b * (2 * D_T * W_L * W_t) / 27$
 $V_W = 0.0$ cubic yards

Total Class C, Superstructure 255.7 cubic yards

Epoxy Coated Reinforcing Bar Quantities

Bent Body 37,070 lbs.

Wingwalls 00 lbs.

Total 37,070 lbs.

Piling Quantities

Number of Piles per Bent 23 piles

Estimated Pile Length 60 ft.

Total Length of Piles 2,760 linear feet

Pipe, End Bent Drain, 6" = $N_b * (L_B + 2 * (W_L + 3 * D_T)) = 0.0$ ft.

Geotextiles = $N_b * ((D_T - A_p) * 1.031 + 4.5') * L_B / 9 = 0.0$ sys

Aggregate for End Bent Backfill

$V_{bf} = ((D_T - A_p) / 4 + 1.5) * 1.5 / 2 * (D_T - A_p) * L_B * N_b$
 $V_{bf} = 0$ cubic yards

SR32 over SR37

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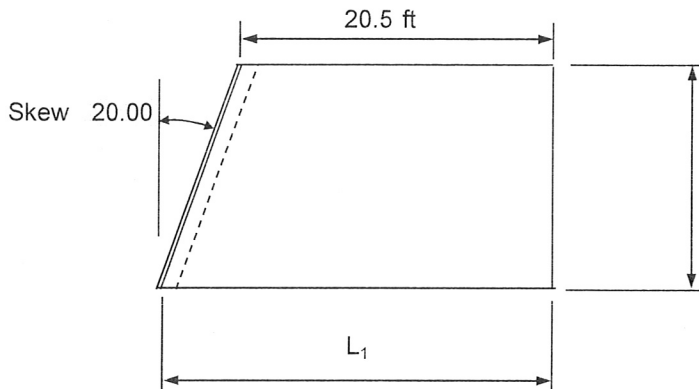
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Rev by

Approach Slab Quantities

Structure Number
SR32 over SR 37

Number or Approach Slabs 4



O-to-O Copping $W_c =$ 92.67 ft.

$$L_1 = 20.5 + (W_c \times \tan \text{skew})$$

$$L_1 = 54.23 \text{ ft.}$$

$$D_{\text{sub}} = \text{Depth of Aggregate (inches)} = 6$$

$$\text{Reinforced Concrete Bridge Approach (A)} = (L_1 + 20.5) / 2 * W_c / 9$$

$$A = 385 \text{ sys per approach}$$

$$\text{Dense Graded Subbase (T}_{\text{base}}) = A * D_{\text{sub}}$$

$$T_{\text{base}} = 64.0 \text{ cys per approach}$$

Epoxy Coated Reinforcing Bars

Reinforcement Rates 35 #/sy

Total Weight 13,466 Lbs.

per approach

Grand Totals

$$A = 1,539 \text{ sys}$$

$$T_{\text{base}} = 256 \text{ cys}$$

$$\text{Reinforcing} = 53,863 \text{ Lbs.}$$

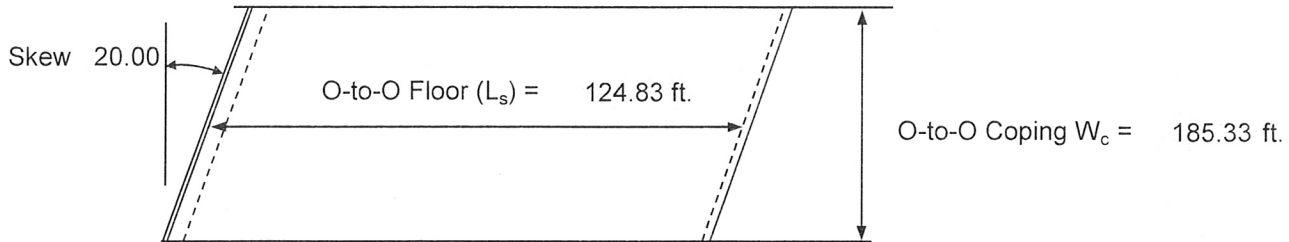
SR32 over SR37

Des by JTB 10/24/2012

Chk by JDR 11/14/12

Rev by _____

Deck Quantities

Structure Number
SR32 over SR 37Slab Thickness T_s = 8.00 inchesCoping Depth D_c = 9 inchesClear Roadway Width CR = 181.8 ft

Concrete Quantities

Class C, Superstructure

Deck Slab $V_D = (L_s * W_c * T_s) / 27$ $V_D = 571.2$ cubic yardsSidewalk $V_s = (L_s * (W_c - 60') * 1') / 27$ $V_s = 579.4$ cubic yardsConcrete in fillets over beams and in thickened copings
Increase deck concrete by 15% $V_T = 1331.6$ cys cubic yards

Twin Structure = NO

of Bridge Rail Trans = 4

Pier Diaphragm - Class, C, Superstr.
(add to Concrete, C, Superstructure) $Vol = 3.83 * 3.5 * 192 * 1 / 27 = 95.3$ cys

Bridge Railing

Area of Rail $A_r = 3.64$ Sq. Ft.Perimeter $P = 8.65$ Ft.

LFT = 250

 $V_R = (L_s * A_r) / 27$ $V_R = 33.7$ cubic Yards

Surface Seal

Deck = $L_s * W_c = 23135$ square feetCoping = $L_s * D_c * 2 = 833$ square feetRail = $L_s * P * 2 = 4320$ square feet

Total 28,288 square feet

Epoxy Coated Reinforcing Bars

Reinforcement Rates 250 #/cy

Deck 250 #/cy

Rail 330 #/cy

Deck 332900 Lbs.

Rail 11121 Lbs.

Trans. 4532 Lbs.

Total Weight 348,553 Lbs.

Grates, Basins, and Fittings, Cast Iron

 $N_G = 0$ each

Weight per Drain = 1000 Lbs.

Total Weight 0 Lbs.

Roadway Drain (SQ or OS)

 $N_G = 0$ each

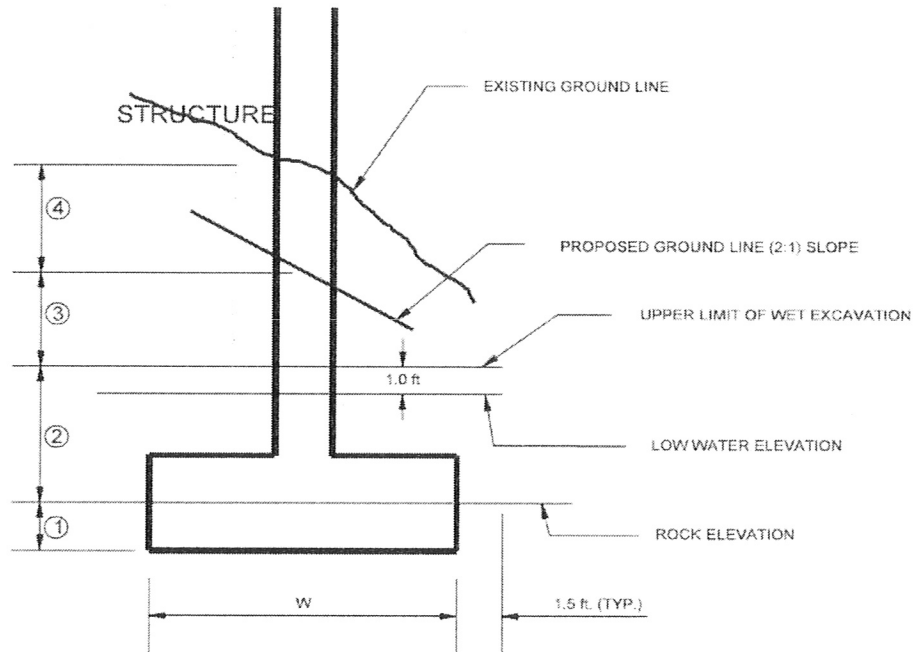
SR 32 over SR37

Des by JTB 10/24/2012

Chk by JTB 11/14/12

Rev by _____

Excavation Quantities

Structure Number
SR32 over SR 37Number of Piers $N_p = 1$ $D_c = 6$ ft. $D_{dry} = 0$ ft. $D_{wet} = 0$ ft. $D_x = 0$ ft. $W = 9$ ft. $L = 197$ ft.Class X Excavation (V_x) = $N_p \times L \times W \times D_x / 27 =$ 0 cubic yardsWet Excavation (V_{wet}) = $N_p \times (L+3)(W+3)(D_{wet}) / 27 =$ 0 cubic yardsDry Excavation (V_{dry}) = $N_p \times (L+3)(W+3)(D_{dry}) / 27 =$ 0 cubic yardsFnd. Exc.(Unclass.) (V_c) = $N_p \times (L+3)(W+3)(D_c) / 27 =$ 533 cubic yardsIs this structure over a waterway? **No**B-Borrow (V_b) = Sum of Excavation Items = 533 cubic yards

Rev. 9/2/09

SR32 over SR37

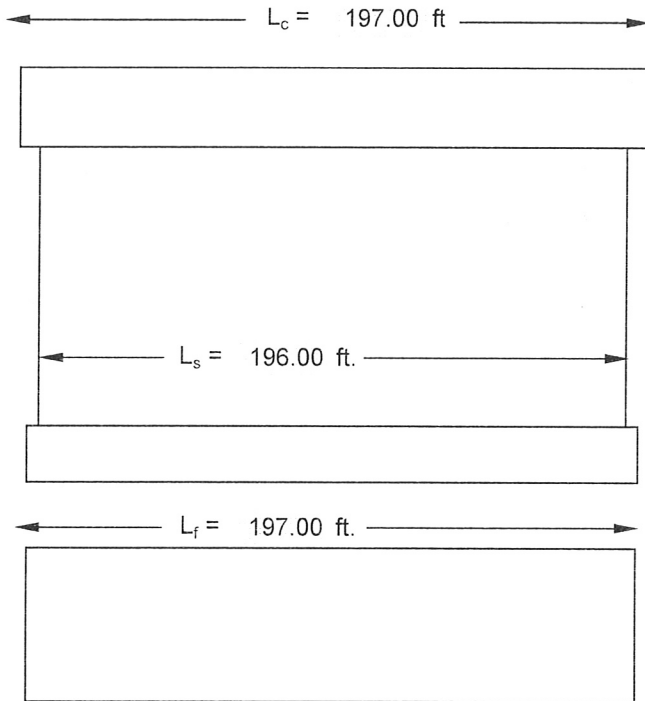
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Pier Quantities

Structure Number
SR32 over SR 37



$W_c = 3$ ft

$H_c = 2.5$ ft

$T_s = 2$
 $H_s = 16$ ft

$H_f = 3$ ft

$W_f = 9$ ft

Number of Piers 1

Reinforcing Rates
Footings 110 #/CY
Stem & Cap 130 #/CY

Concrete Quantities

Class B, Footing	$V_B = L_f \times W_f \times H_f \times 1/27$
	$V_B = 197.0$ cubic yards
Class A, Substructure	$V_A = (L_s \times W_s \times H_s + L_c \times W_c \times H_c) \times 1/27$
	$V_A = 287.0$ cubic yards

Reinforcing Bar Quantities

Footings	21,670	lbs.
Stem and Cap	37,310	lbs.
Total	58,980	lbs.

Piling Quantities

Est of Piles per Pier	48	piles
Estimated Pile Length	60	ft.
Total Length of Piles	2,880	linear feet