WSP USA
Contract No. 2022-108
City of Flagstaff Downtown Mile Project
Planning and Design Services
Project No. 30902258

Scope of Work
For
Planning and Design Services
Change Order #6
(City of Flagstaff Design Change Order #5)

March 2025

GENERAL DESCRIPTION OF WORK:

WSP USA (WSP) is continuing to provide Design Services for the Downtown Mile project. As part of a recent CRISI award to the City of Flagstaff, the north Amtrak platform will be reconstructed to meet current platform requirements, and a new south platform will be constructed to service passengers from future BNSF Railway Mainline #3. This contract modification is being submitted to capture additional scope items for this work.

Additional work under this contract modification will be supported by the following subconsultants:

1. Peak Engineering: Site Civil plans and drainage plans.

It is anticipated that the Downtown Mile project will become a Construction Manager at Risk (CMAR) project between 60% Design and 90% Design. It is assumed under this scope that redesign and value engineering efforts will not require significant changes to design established at 60%. Significant changes in design may require a subsequent contract modification to complete the work.

PROJECT SCHEDULE

Additional time based on additional scope is required for these tasks. A revised schedule is attached to this proposal. An extension of the contract to June 30, 2026, is requested. The extension will be tied to this scope which will assume a different submittal schedule than other scope for this project.

TASK 1.0 – PROJECT MANAGEMENT AND COORDINATION

The work under this task will include general project management and coordination activities during the project. This task includes project management, meetings, project documentation, and development of meeting agendas and minutes.

SUBTASKS:

TASK 1.1: Project Management work will include project set up, monthly invoicing, and project tracking. Additional work under this task includes an additional 10 months of time for the schedule extension.

TASK 9.0 – RAIL

The work under this task includes the scope of work required to design the reconstruction of the north Amtrak platform along BNSF Railway Mainline #2 and to design a new south platform along BNSF Railway Mainline #3 to meet current BNSF and Amtrak standards. The south platform scope was included in the original contract but was removed from the scope as part of City of Flagstaff Design Change Order #3. It is being brought back into scope with the award of the CRISI grant for the platform work.

It is anticipated that a preliminary 30% concept will be developed and submitted to the City, BNSF, and Amtrak for review and comment. After review, a final 90% design package will be submitted for review followed by a PS&E submittal. It is anticipated that PS&E submittal will have no further comments and will not require any additional changes. It is also anticipated that there will be no significant changes after the 30% submittal has been reviewed by all parties. Additional submittal packages may require a contract modification.

The submittal packages will be developed independently from the Downtown Mile plan set and will be considered supplemental packages that will generally follow project CADD standards except as modified by Amtrak standards as required. It is anticipated that this package will consist of approximately 60 sheets based on similar projects.

TASK 9.6 (Amtrak Station South): Work includes the design of improvements to a new Amtrak platform to be constructed between BNSF Railway Mainline #3 and the USACE Rio de Flag Flood Control project. Anticipated work includes civil layout and design of the platform, access walkways to meet ADA requirements, design of drainage systems to collect and convey water away from BNSF Railway (to be completed by Subconsultant Peak Engineering, Inc.), and upgrades to signs, lighting, and other features per the Amtrak Station Program Planning Guidelines. Design of elevated features such as elevators and raised platforms across BNSF tracks are not included within this scope.

TASK 9.6.1 Amtrak Coordination and Site Visit: This work includes a site visit to review existing conditions and identify constraints within the project limits. The field visit will occur after a preliminary concept is developed to verify field constraints and scope. A meeting will be set up during the site visit to include the City, BNSF and Amtrak (if available) to discuss design features. Additional bi-monthly meetings are anticipated during the design of the north platform and will include the Project Manager and two lead Engineers for an anticipated total of 6 bi-monthly meetings. Meetings are anticipated to last 1 hour and will be held virtually. WSP will prepare a meeting agenda and minutes. Costs for the site visit meetings are split between Task 9.6.1 and Task 9.7.1.

It is also anticipated that coordination will be required to develop a design variance memo for these platforms addressing standards under NFPA 130. Per discussions with Amtrak, a variance request will likely apply for both platforms. Time is included to develop a memorandum outlining variances from NFPA 130 and discussions and coordination with both Amtrak and BNSF for concurrence with the identified variances. Costs for the memorandum and coordination meetings are split between Task 9.6.1 and Task 9.7.1.

TASK 9.6.2 Site Civil: This work includes coordination with Peak Engineering for the layout of an approximately 650-foot-long platform reconstructed to 8" above top of rail, to current standards. WSP will develop the site civil layout of railings, signage, lighting, and landscaping to meet current Amtrak platform standards. Work is confined to the platform and ingress/egress areas. No modifications for the building or existing parking lot are included. Passenger Information Display System (PIDS) layout will be limited to electrical conduit and equipment locations. Amtrak has indicated the PIDS design will be performed by Amtrak.

TASK 9.6.3 Structural: This work includes the design of the platform following the BNSF Passenger Platform Guidelines. It is anticipated that a reinforced slab on grade is appropriate for this project with typical doweled construction joints. If directed by Amtrak or BNSF to provide a different structural system, a contract modification may be required. It is also anticipated that other structural systems such as signage and rails will be based on typical Amtrak or local agency details and no special details will be required for these elements. Costs for the structural design of the platform are split between Task 9.6.3 and Task 9.7.3.

Design of a platform canopy is included in this task. It is assumed that the canopy will be a steel frame cantilever system and not a full enclosure. Design will be per the AISC Steel Construction Manual (LRFD) and the International Building Code. Design will include main force resisting systems (vertical and horizontal), secondary systems for components and cladding, and foundation systems.

TASK 9.6.4 Architectural: This work includes architectural elements associated with tasks in Task 9.6.2 including flatwork and railing design. Where possible, existing standards and details will be used. No changes to the building or parking lot is included. It is assumed under this task that the City will provide coordination with the State Historic Preservation Office (SHPO). A previous project at this location utilized a reset of existing brick pavers. Pavers are not currently preferred by Amtrak, and it is assumed that a concrete slab will be utilized. If pavers are directed, a contract modification may be required to incorporate these details into the plan set. It is assumed that architectural details will be similar at both platforms. Costs for the architectural design of the platform are split between Task 9.6.4 and Task 9.7.4. Work also includes the architectural design for the canopy. The architect is responsible for general concept, finishing, and components and cladding. The architect will submit concepts to the City and the Beautification and Public Art Commission (BPAC) during concept development for input.

TASK 9.6.5 Electrical: This work includes electrical elements associated with tasks in Task 9.6.2. Additional work will consist of providing conduit for potential Passenger Information Display Systems (PIDS). It is assumed that lighting design will be required at the south platform with work included in this task. Full design of the PIDS system is not included in this scope but can be added through a contract modification if required.

TASK 9.6.6 Construction Cost Estimate: This work includes development of an Engineer's Estimate of Probable Cost.

TASK 9.7 (Amtrak Station North): Work includes the improvements to the existing Amtrak platform to bring the existing platform into existing rail and Amtrak standards. Anticipated work includes reconstruction of the platform, improvements to the area between the historic building and the reconstructed platform to meet ADA requirements, improvements to drainage to address existing ponding issues along BNSF tracks (to be performed by Peak Engineering), and upgrades to signs, lighting, and other features per Amtrak Station Program Planning Guidelines. Design of elevated features such as elevators and raised platforms across BNSF tracks are not included within this scope.

TASK 9.7.1 Amtrak Coordination and Site Visit: This work includes a site visit to review existing conditions and identify constraints within the project limits. A meeting will be set up during the site visit to include the City, BNSF and Amtrak (if available) to discuss design features. Additional bi-monthly meetings are anticipated during the design of the north platform and will include the Project Manager and two lead Engineers for an anticipated total of 6 bi-monthly meetings. Meetings are anticipated to last 1 hour and will be held virtually. WSP will prepare a meeting agenda and minutes. Costs for the site visit meetings are split between Task 9.6.1 and Task 9.7.1.

It is also anticipated that coordination will be required to develop a design variance memo for these platforms addressing standards under NFPA 130. Per discussions with Amtrak, a variance request will likely apply for both platforms. Time is included to develop a memorandum outlining variances from NFPA 130 and discussions and coordination with both Amtrak and BNSF for concurrence with the identified variances. Costs for the memorandum and coordination meetings are split between Task 9.6.1 and Task 9.7.1.

TASK 9.7.2 Site Civil: This work includes coordination with Peak Engineering for the layout of an approximately 650-foot-long platform reconstructed to 8” above top of rail, to current standards. WSP will develop the site civil layout of railings, signage, lighting, and landscaping to meet current Amtrak platform standards. Work is confined to the platform and ingress/egress areas. No modifications for the building or existing parking lot are included. PIDS layout will be limited to electrical conduit and equipment locations. Amtrak has indicated the PIDS design will be performed by Amtrak.

TASK 9.7.3 Structural: This work includes the design of the platform following the BNSF Passenger Platform Guidelines. It is anticipated that a reinforced slab on grade is appropriate for this project with typical doweled construction joints. If directed by Amtrak or BNSF to provide a different structural system, a contract modification may be required. It is also anticipated that other structural systems such as signage and rails will be based on typical Amtrak or local agency details and no special details will be required for these elements. Costs for the structural design of the platform are split between Task 9.6.3 and Task 9.7.3.

TASK 9.7.4 Architectural: This work includes architectural elements associated with tasks in Task 9.7.2 including flatwork and railing design. Where possible, existing standards and details will be used. No changes to the building or parking lot is included. It is assumed under this task that the City will provide coordination with the State Historic Preservation Office (SHPO). A previous project at this location utilized a reset of existing brick pavers. Pavers are not currently preferred by Amtrak, and it is assumed that a concrete slab will be utilized. If pavers are directed, a contract modification may be required to incorporate these details into the plan set. It is assumed that architectural details will be similar at both platforms. Costs for the architectural design of the platform are split between Task 9.6.4 and Task

9.7.4. Work also includes the architectural design for the canopy. The architect is responsible for general concept, finishing, and components and cladding.

TASK 9.7.5 Electrical: This work includes electrical elements associated with tasks in Task 9.7.2. Additional work will consist of providing conduit for potential Passenger Information Display Systems (PIDS). It is anticipated that existing lighting will not be modified. Full design of the PIDS system is not included in this scope but can be added through a contract modification if required.

TASK 9.7.6 Construction Cost Estimate: This work includes development of an Engineer's Estimate of Probable Cost.

DELIVERABLES:

Meeting Agenda and Minutes (Electronic PDF) when WSP is the organizer and agenda and minutes are determined to be appropriate by the City or WSP.

Design Concept Exhibit (Electronic PDF)

30% Amtrak Platform Plans, Specifications, and Estimate (Electronic PDF)

Final Amtrak Platform Plans, Specifications, and Estimate (Electronic PDF)

PS&E Amtrak Platform Plans, Specifications, and Estimate (Electronic PDF)

ASSUMPTIONS:

1. Amtrak will provide turning movements and load requirements for any specialty vehicles to support service. Civil and structural will consider these vehicles. It is anticipated that a wheelchair assist vehicle and baggage cart will be included in design.
2. All utility work can be serviced from existing utilities.
3. The canopy will be a standard "off the shelf" product or simple steel post and canopy system common throughout the state. If a non-standard canopy is desired, a contract modification will be required.

EXCLUSIONS

Services excluded from this Scope of Work include, but are not limited to:

1. No additional environmental work is included in this scope. Any additional environmental work caused by changes to scope will require a contract modification that will be submitted to the City for review and approval.
2. The north platform work is limited to the area required to provide a platform and ingress/egress/ADA ramps for use by Amtrak passengers. Additional work to the building and parking lot are not included in this scope of work.
3. PIDS layout will be limited to electrical conduit and equipment locations. Amtrak has indicated the PIDS design will be performed by Amtrak.
4. Specifications will be limited to supplemental items not covered by the Downtown Mile project specifications.

5. Design of elevated platforms, stairways, or elevators across BNSF for use by Amtrak users is not included within this scope of work.
6. Design of a wheelchair lift enclosure is not included within this scope but may be added by contract modification if required by Amtrak.

DIRECT EXPENSES

Direct Expenses are based upon the agreed upon rates as established by the Contract. See the attached cost proposal for additional information.

Contract No.: 2022-108

COF Downtown Mile Project

New Contract:

Contract Mod: X No. 6

DERIVATION OF COST PROPOSAL SUMMARY

ESTIMATED DIRECT LABOR

Classification	Manhours	% of Total Hours	Billable Hourly Rate	Estimated Labor Costs
Project Principal	66	5.3%	$285.00	$18,810.00
Project Manager	0	0.0%	$250.00	$0.00
Resident Engineer	0	0.0%	$230.00	$0.00
Project Engineer-Sr	298	24.1%	$255.00	$75,990.00
Project Engineer	100	8.1%	$180.00	$18,000.00
Engineer	192	15.6%	$125.00	$24,000.00
Designer - Sr.	60	4.9%	$145.00	$8,700.00
Designer	94	7.6%	$95.00	$8,930.00
Geologist-Sr.	0	0.0%	$280.00	$0.00
CADD Technician	404	32.7%	$105.00	$42,420.00
Environmental	0	0.0%	$180.00	$0.00
Administrative	0	0.0%	$95.00	$0.00
Project Administrator	20	1.6%	$145.00	$2,900.00
Transportation Planner	0	0.0%	$105.00	$0.00
Transportation Planner - Sr.	0	0.0%	$205.00	$0.00
GIS Analysis/Technician	0	0.0%	$175.00	$0.00
Graphic Designer - Sr.	0	0.0%	$130.00	$0.00
Graphic Designer	0	0.0%	$90.00	$0.00
PI Specialist	0	0.0%	$145.00	$0.00
TOTAL Hours	1,234			
			Sub-Total Labor Expense:	$199,750.00

ESTIMATED DIRECT EXPENSES

Outside Reproduction	$0.00
Courier/Postage	$0.00
Mileage	$0.00
Travel	$3,308.00
Miscellaneous Expenses	$0.00
Sub-Total Direct Expenses:	$3,308.00

ESTIMATED OUTSIDE SERVICES AND CONSULTANTS

Subconsultant	Method of Compensation	DBE	Fee
Peak - NP	Unit Rate	No	$146,920.00
Peak - SP	Unit Rate	No	$121,165.00
0	Unit Rate	0	$0.00
0	Unit Rate	0	$0.00
0	Unit Rate	0	$0.00
0	Unit Rate	0	$0.00
0	Unit Rate	0	$0.00
0	Unit Rate	0	$0.00
	Sub-Total Outside Services Expense:		$268,085.00

ESTIMATED TOTAL

TOTAL ESTIMATED COST: $471,143.00

CONTRACT TIME: 365 CALENDAR DAYS

CONTINGENCY (10%) $40,000.00

Melita

Signature

3/12/2025

Date

COF Downtown Mile Project

Contract No. 2022-108

TASK/DISCIPLINE	Project Principal	Project Manager	Resident Engineer	Project Engineer-Sr	Project Engineer	Engineer	Designer - Sr.	Designer	Geologist-Sr.	CADD Technician	Environmental	Administrative	Project Administrator	Transportation Planner	Transportation Planner - Sr.	GIS Analysis/Technician	Graphic Designer - Sr.	Graphic Designer	PI Specialist	Total
1.0 Project Management	10	0	0	10	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	40.0
2.0 Roadway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
3.0 Drainage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
4.0 Traffic and MOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
5.0 Structures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
6.0 Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
7.0 Environmental	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
8.0 Public Involvement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
9.0 Rail	56	0	0	288	100	192	60	94	0	404	0	0	0	0	0	0	0	0	0	1,194.0
10.0 Planning	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
PROJECT TOTAL HOURS	66	0	0	298	100	192	60	94	0	404	0	0	20	0	0	0	0	0	0	1234

COST BREAKDOWN BY TASK:

MANAGEMENT $8,300

NORTH AMTRAK PLATFORM

WSP FEE	$79,170
PEAK FEE	$146,920
TOTAL	$226,090

SOUTH AMTRAK PLATFORM

WSP FEE	$112,280
PEAK FEE	$121,165
TOTAL	$233,445

TOTAL $467,835

EXPENSES $3,308

COF Downtown Mile Project
Contract No. 2022-108

1.0 Project Management TASK DESCRIPTION	Total Hours	Project Principal	Project Manager	Resident Engineer	Project Engineer-Sr	Project Engineer	Engineer	Designer - Sr.	Designer	Geologist-Sr.	CADD Technician	Environmental	Administrative	Project Administrator	Transportation Planner	Transportation Planner - Sr.	GIS Analysis/Technician	Graphic Designer - Sr.	Graphic Designer	PI Specialist
1.1 Project Management (10 Month Extension)	40	10			10									20						
	0																			
	0																			
	0																			
	0																			
	0																			
	0																			
	0																			
	0																			
	0																			
	0																			
SUBTOTAL 1.0 Project Management	40	10	0	0	10	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0

Task Cost: $ 8,300.00

COF Downtown Mile Project
Contract No. 2022-108

9.0 Rail TASK DESCRIPTION	Total Hours	Project Principal	Project Manager	Resident Engineer	Project Engineer-Sr	Project Engineer	Engineer	Designer - Sr.	Designer	Geologist-Sr.	CADD Technician	Environmental	Administrative	Project Administrator	Transportation Planner	Transportation Planner - Sr.	GIS Analysis/Technician	Graphic Designer - Sr.	Graphic Designer	PI Specialist
Task 9.6 - Amtrak Station - Southern Platform	0																			
Task 9.6.1 - Amtrak Coordination & Site Visit	78	18			52	8														
Task 9.6.2 Site Civil (Railing, signage, lighting, PIDS conduit)	140				44	16	40				40									
Task 9.6.3 Structural (Platform and Canopy)	210	10			32		56				112									
Task 9.6.4 Architectural (Railing, Aesthetics, and Canopy)	102				12			30			60									
Task 9.6.5 Electrical	162				8	32			62		60									
Task 9.6.6 Construction Cost Estimate and Specifications	32	4			8		20													
SUBTOTAL South Platform	724	32	0	0	156	56	116	30	62	0	272	0	0	0	0	0	0	0	0	0
																			South Platform Cost:	$ 112,280.00
Task 9.7 - Amtrak Station - Northern Platform	0																			
Task 9.7.1 - Amtrak Coordination & Site Visit	78	18			52	8														
Task 9.7.2 Site Civil (Railing, signage, lighting, PIDS conduit)	140				44	16	40				40									
Task 9.7.3 Structural (Platform)	58	2			8		16				32									
Task 9.7.4 Architectural (Railing and Aesthetics)	102				12			30			60									
Task 9.7.5 Electrical	60				8	20			32											
Task 9.7.6 Construction Cost Estimate and Specifications	32	4			8		20													
SUBTOTAL North Platform	470	24	0	0	132	44	76	30	32	0	132	0	0	0	0	0	0	0	0	0
																			North Platform Cost:	$ 79,170.00
SUBTOTAL 9.0 Rail	1194	56	0	0	288	100	192	60	94	0	404	0	0	0	0	0	0	0	0	0
																			Task Cost:	$ 191,450.00

COF Downtown Mile Project
Contract No. 2022-108

DIRECT EXPENSES											
ITEM								No.	Unit Cost	Cost	
Outside Reproduction											
11"x17" Copies (Color)									$ 1.25	$ -	
11"x17" Copies (B&W)									$ 0.50	$ -	
8 ½" x 11" Copies (Color)									$ 0.75	$ -	
8 ½" x 11" Copies B&W)									$ 0.25	$ -	
5" x 10" card stock mailer (color, 50% bleed)									$ 0.50	$ -	
									SUB-TOTAL:	$ -	
Courier/Postage/Overnight Mail											
Courier									$ 7.95	$ -	
Postage									$ 0.50	$ -	
Overnight Mail									$ 5.00	$ -	
									SUB-TOTAL:	$ -	
Mileage											
Site Reconn/Boring Locate			@	300 miles	roundtrip			0	$ 0.560	$ -	
Field Work mob/demob			@	300 miles	roundtrip			0	$ 0.560	$ -	
Field Work daily travel			@	20 miles				0	$ 0.560	$ -	
Meetings			@	300 miles	roundtrip			0	$ 0.560	$ -	
Field Visits			@	300 miles	roundtrip			0	$ 0.560	$ -	
									SUB-TOTAL:	$ -	
Travel*											
Meals	2 staff	@	3 days	@	$ 74.00			6	$ 74.00	$ 444.00	
Lodging	2 staff	@	2 days	@	$ 141.00			4	$ 141.00	$ 564.00	
Rental Car	1 staff	@	3 days	@	$ 100.00			3	$ 100.00	$ 300.00	
Airfare	2 staff	@	1 trips	@	$ 1,000.00			2	$ 1,000.00	$ 2,000.00	
		@		@				0	$ -	$ -	
*Covers only travel 15 miles or more beyond the City Limits or by Firms from other than Flagstaff									SUB-TOTAL:	$ 3,308.00	
Miscellaneous Expenses											
									SUB-TOTAL:	$ -	
TOTAL DIRECT EXPENSES											
									TOTAL:	$ 3,308.00	

SCOPE OF SERVICES

Date:	July 17, 2024 Rev. July 30, 2024 Rev. January 10, 2025
Project:	**Amtrak Platform** (associated with **Downtown Mile** project)
WSP Project No:	TBD
Peak Project No:	24WSP01
Prepared For:	WSP *(Client: City of Flagstaff)*
Prepared By:	J.Leid

PROJECT DESCRIPTION

The project is replacement of the Amtrak boarding and deboarding area (platform) between the Flagstaff Visitor's Center and the BNSF Railway right of way on the north side and addition of a platform along the south side. The project is bounded by Beaver Street to the west and San Francisco Street to the east. The project will address ADA compliance and nuisance drainage issues along the railroad tracks. This project is to be done in conjunction with the Downtown Mile project which is a mile-long section of rail improvements and local infrastructure improvements. There will be a minor change in rail elevation adjacent to the platform and we will coordinate with WSP's rail engineer to accommodate the new elevations.

WSP is the prime consultant for the City of Flagstaff and will lead the submittal and coordination with BNSF and Amtrak. WSP's scope includes rail design and establishing elevations within BNSF Right of Way.

Peak's scope is to provide grading and drainage design for both the north and south platforms. Peak will prepare design plans and a drainage report for surface and drainage improvements. Peak Engineering's plans will be incorporated into WSP's project plan set. Separate cover, notes, index and legend sheets are not necessary. The drainage design report will be prepared in accordance with City of Flagstaff engineering standards.

For tracking purposes, tasks are separate for the north and south platforms. However, the plans, documents and deliverables will not be separate.

NORTH PLATFORM TASKS:

For mitigating the nuisance drainage issue along the platform and north edge of the railroad tracks, stormwater could be routed to one of two underground systems. The area is very flat and there is not space or grade to install a ditch for stormwater runoff. Exhibit A shows the location of the platform and the two options for conveyance of runoff to existing stormdrain systems, as depicted by the teal lines.

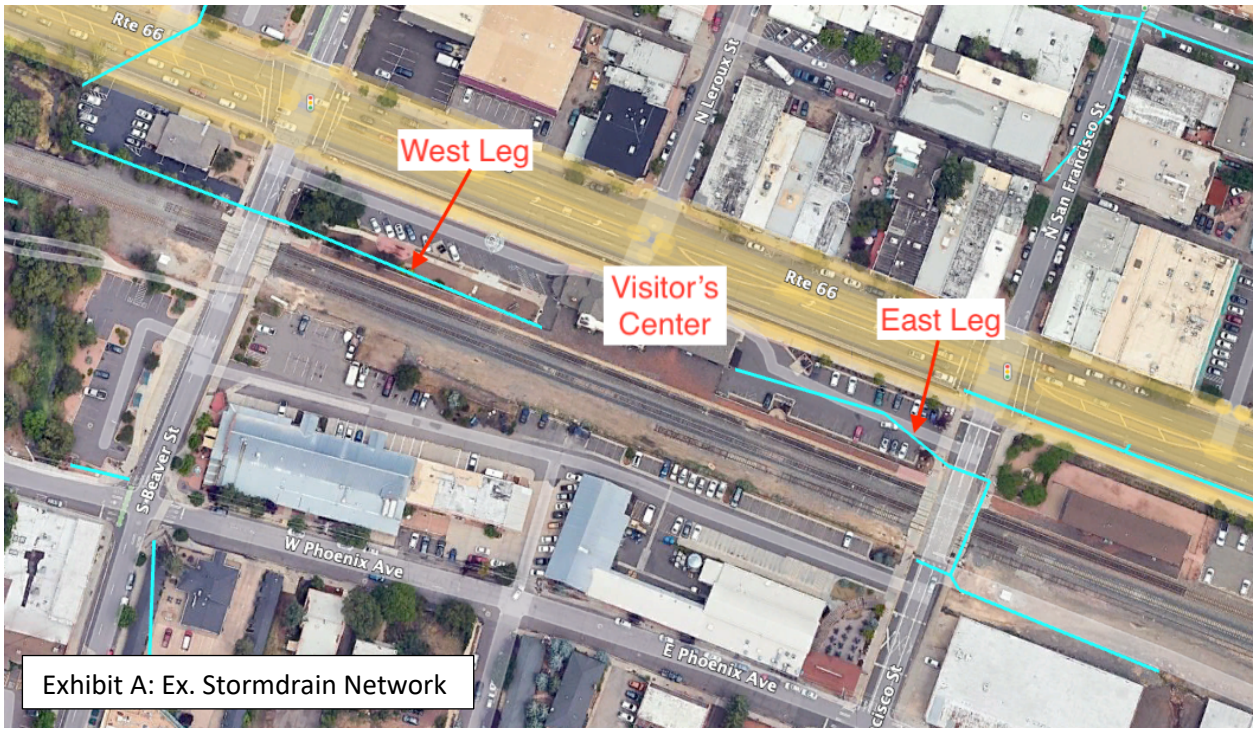

Exhibit A: Ex. Stormdrain Network

N1. Existing Conditions Analysis

Peak Engineering will:

- Coordinate with Adams Trenching to inspect the west leg of the stormdrain system. Investigation would extend to the Rio de Flag (west) and includes size, type and the general condition of piping based on visual or video observation. The pipe will likely need to be cleaned prior to investigation.
- Perform hydrologic analysis: determine discharge rate to the east and west stormdrain legs and outfall for existing paver platform. It is assumed that drainage from Route 66 and north does not contribute to the east and west stormdrain legs or impact the visitor's center.
- Perform hydraulic analysis: evaluate catch basin inlet type, condition and its impacts on the drainage system and pipe capacity of the east and west leg stormdrain systems.

Note that a separate additional services request includes analysis of the existing stormdrain system in San Francisco Street at the BNSF crossing and a pipe inspection by Adams Trenching. The intent is that this work will occur simultaneously. The scope of this task is primarily for analysis of the west leg and for the stormdrain in the parking lot on the east leg.

Deliverables: Report of existing stormdrain condition (Adams Trenching), hydrologic model (internal) & existing hydraulic capacity (internal)

N2. Preliminary Design

Peak Engineering will:

- Use existing stormdrain capacity to determine which inlets would need to be upsized and which segments would require upsizing to meet the City's drainage requirements.
- Prepare a memo of drainage findings.
- Meet with City staff to discuss impacts of drainage findings and to steer the 30% design approach.
- Prepare 30% design for a drainage strategy that would mitigate ponded water from BNSF right of way and the paver platform area. The drainage strategy could include upsizing one of the stormdrain legs or could include underground detention (below pavers) for attenuation if maintaining existing discharge rate to the east and west stormdrain legs.
- Prepare 30% design for the platform replacement for ADA compliance.
- Prepare 30% design plans that show extent of surface and underground improvements. The 30% design would include plan sheet(s) of the extent of platform replacement, stormdrain layout (no profiles) and would include call-out text to describe intent.
- Prepare quantities in support of an engineer's opinion of probable construction cost, EOPCC, which would be included in the overall Downtown Mile project.

Deliverables: Existing stormdrain capacity memo, 30% design plans, drainage memo, design coordination meeting, quantities.

Comments from the preliminary design will be incorporated into the Final 1 design.

N3. Final 1 Design

Peak Engineering will prepare Final 1 design plans and a drainage report. The Final 1 plans will be fully developed. Final 1 Plans are to include:

- Plan and profile sheets for stormdrain improvements which could include piping, trench drain and underdrain system.
- Construction control (sta/offset or N, E) for the surface improvements and stormdrain system.
- Surface grading sheets showing ramps, landing areas, match-up limits.
- Details of inlets or trench drains if standard details are not available

Peak will coordinate rail and platform grading with WSP.

We have included time for two coordination meetings with BNSF, Amtrak and/or City of Flagstaff during design.

The drainage report will include the summary of existing conditions from the Preliminary Design phase, a narrative of the approach, pre vs post runoff calculations, inlet and pipe capacities for existing and/or proposed. The drainage report will be per the City of Flagstaff Stormwater Manual.

We will update quantities for inclusion in the EOPCC for the Downtown Mile project.

The Final 1 Plans will be "For Agency Review". The drainage report will be sealed for City review.

Deliverables: Final 1 Plans, Final Drainage Report, quantities

N4. Final 2 Design

Comments from the Final 1 Design will be incorporated into the Final 2 Design.

Peak Engineering will prepare Final 2 sealed plan sheets (sealed for agency approval & signatures). Only minor edits are anticipated between Final 1 and Final 2 Design. Peak will issue a drainage report addendum, if required.

Deliverables: Final 2 Plans (sealed), drainage report addendum

SOUTH PLATFORM TASKS:

There are currently no boarding facilities on the south edge of the tracks. Just outside of the BNSF Right of Way is a public parking lot owned by the City of Flagstaff. The parking lot is the future alignment of the Rio de Flag box culvert.

The new south platform is to be located within the BNSF Right of Way and is to extend to Beaver Street and San Francisco Street to the west and east, respectively. The platform and connections to Beaver and San Francisco Streets are to be ADA compliant. Since the south platform will be located within a fenced area, an emergency egress will be designed approximately mid-point between the street connections. The emergency egress is anticipated to be an ADA compliant sidewalk ramp that exits onto City-owned property.

S1. Existing Conditions Analysis

Peak Engineering will:

- Perform hydrologic analysis: determine discharge rate and outfall for existing conditions; specifically, the graded area between the rail and the City's parking lot.

- Perform hydraulic analysis: evaluate condition and capacity of the stormdrain inlet in San Francisco Street, west side. Note that the inlets and stormdrain in San Francisco are to be modified/relocated by the Rio de Flag box culvert. This scope task is to evaluate and document the existing condition of the catchbasin. Evaluation of the stormdrain that this catchbasin is connected to is part of the N1 task.

Deliverables: Hydrologic model (internal) & existing hydraulic capacity (internal)

S2. Preliminary Design

Peak Engineering will:

- Prepare 30% design for a drainage strategy that would convey water from the BNSF right of way and the paver platform area. The drainage strategy could include addition of inlets and an underground stormdrain system that connects to the stormdrain in San Francisco Street or into the future Rio de Flag box culvert.
- Prepare 30% design for the platform for ADA compliance, including connections to San Francisco and Beaver Streets.
- Prepare 30% design plans that show extent of surface and underground improvements. The 30% design would include plan sheet(s) of the extent of platform stormdrain layout (no profiles) and would include call-out text to describe intent.
- Prepare quantities in support of an engineer's opinion of probable construction cost, EOPCC, which would be included in the overall project.

Deliverables: 30% design plans.

Comments from the preliminary design will be incorporated into the Final 1 design.

S3. Final 1 Design

Peak Engineering will prepare Final 1 design plans and a drainage report. The Final 1 plans will be fully developed. Final 1 Plans are to include:

- Plan and profile sheets for stormdrain improvements which could include piping, trench drain and underdrain system.
- Construction control (sta/offset or N, E) for the surface improvements and stormdrain system.
- Surface grading sheets showing ramps, landing areas, match-up limits.
- Details of inlets or trench drains if standard details are not available.

Peak will coordinate rail and platform grading with WSP.

The drainage report will include the summary of existing conditions from the Preliminary Design phase, pre vs post runoff calculations, inlet and pipe capacities for existing and/or proposed. The drainage report will be per the City of Flagstaff Stormwater Manual.

We will update quantities for inclusion in the EOPCC for the overall project.

The Final 1 Plans will be "For Agency Review". The drainage reportwill be sealed for City review.

Deliverables: Final 1 Plans, Final Drainage Report, Quantities

Comments from the Final 1 Design will be incorporated into the Final 2 Design.

S4. Final 2 Design

Peak Engineering will prepare Final 2 sealed plan sheets (sealed for agency approval & signatures). Only minor edits are anticipated between Final 1 and Final 2 Design. Peak will issue a drainage report addendum, if required.

Deliverables: Final 2 Plans (sealed), drainage report addendum

PROPOSED FEE

Please refer to the cost detail summary, attached, for a breakdown of hours and hourly rates in support of this proposal.

ASSUMPTIONS & EXCLUSIONS

This work will be incorporated into the design schedule for the Downtown Mile improvements. Time for attendance and participation at regular progress meetings is included in that scope. Should this project be on a different schedule, additional scope and fee may be needed.

The project limits are Beaver Street to the west and San Francisco Street to the east, the Visitor's Center to the north and the City's parking lot to the south.

The north and south platform design will be presented in a single plan set to be included in WSP's design plans. The drainage report will include both the north and south platforms.

We assume that stormwater attenuation is not required for the addition of the south platform. Detention basin design for the south platform is not included. We assume that the Rio de Flag box culvert has the capacity should a stormdrain connection be made to the box. Analysis of the box is not included.

Water/sewer utility design is not needed or included.

Landscape design is by others.

Signage and lighting is by others.

LID is not required and is not included.

An erosion control plan is not included.

Specifications are not included. We intend to call out standard specifications in the general notes on the plan sheets.

The geotechnical engineer will provide the pavement section and detail the paver base for inclusion on Peak's plans.

END

Client Name: WSP

Project Name: Amtrak Platform (extension of Downtown Mile)

Project Number: 24WSP01

Client Information

Name: *Jason Carlaftes*

Address:

Project Budget Summary

Task	Task Description	Principal Engineer		Project Manager		Project Engineer		Designer		Engineering Intern		Technical Drafter		Clerical		Total Hours	Labor Cost per Task
	Hourly Rate:	$240		$215		$195		$150		$100		$100		$90			
		Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars		
1	Task N1: Existing Conditions Analysis	4.00	$ 960	14.00	$ 3,010	-	$ -	65.00	$ 9,750	-	$ -	-	$ -	-	$ -	83.00	$ 13,720
2	Task N2: Preliminary Design	16.00	$ 3,840	59.00	$ 12,685	-	$ -	147.00	$ 22,050	-	$ -	-	$ -	-	$ -	222.00	$ 38,575
3	Task N3: Final 1 Design	35.00	$ 8,400	162.00	$ 34,830	-	$ -	248.00	$ 37,200	-	$ -	-	$ -	-	$ -	445.00	$ 80,430
4	Task N4: Final 2 Design	8.00	$ 1,920	15.00	$ 3,225	-	$ -	27.00	$ 4,050	-	$ -	-	$ -	-	$ -	50.00	$ 9,195
5	Task S1: Existing Conditions Analysis	2.00	$ 480	10.00	$ 2,150	-	$ -	36.00	$ 5,400	-	$ -	-	$ -	-	$ -	48.00	$ 8,030
6	Task S2: Preliminary Design	12.00	$ 2,880	40.00	$ 8,600	-	$ -	123.00	$ 18,450	-	$ -	-	$ -	-	$ -	175.00	$ 29,930
7	Task S3: Final 1 Design	31.00	$ 7,440	138.00	$ 29,670	-	$ -	246.00	$ 36,900	-	$ -	-	$ -	-	$ -	415.00	$ 74,010
8	Task S4: Final 2 Design	8.00	$ 1,920	15.00	$ 3,225	-	$ -	27.00	$ 4,050	-	$ -	-	$ -	-	$ -	50.00	$ 9,195
9	NOT USED	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
10	NOT USED	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
	LABOR TOTAL:		$ 27,840		$ 97,395		$ -		$ 137,850		$ -				$ -		$ 263,085

Reimbursable Project Expenses

A	Printing & Reprographics	$ -
B	Mileage	$ -
C	Meals & Lodging	$ -
D	Equipment	$ -
E	Other (Parking)	$ -
	RPE TOTAL:	$ -

Sub-Consultants

Adams Trenching	$ 5,000
Landscape Architect	$ -
Architect	$ -
Geotechnical	$ -
Other	$ -
SUB-CONSULTANT TOTAL:	$ 5,000

NORTH PLATFORM	$146,920
SOUTH PLATFORM	$121,165
PROJECT TOTAL:	
$	**268,085**